THE UNIVERSITY
OF NORTH CAROLINA
ril 25, 1950 RECORD Number 475

# THE GENERAL CATALOGUE

*FOR*

## THE 156TH SESSION

*1949-1950*

*ANNOUNCEMENTS*
*FOR THE SESSION*
*1950-1951*

THE UNIVERSITY OF NORTH CAROLINA RECORD
Published by THE UNIVERSITY OF NORTH CAROLINA PRESS
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CHAPEL HILL, N. C.
UNDER THE ACT OF AUGUST 24, 1912

## SCHEDULE OF ISSUES OF

## THE RECORD

## FOR YEAR 1949-1950

Research in Progress

Department of City and Regional Planning Catalogue

Institute of Statistics Catalogue

School of Dentistry Catalogue

Summer Session Catalogue

School of Pharmacy Catalogue

School of Library Science Catalogue

Division of Public Welfare and Social Work Catalogue

School of Public Health Catalogue

School of Medicine Catalogue

Graduate School Catalogue

School of Law Catalogue

The General Catalogue

School of Commerce Catalogue

School of Education Catalogue

APRIL 25, 1950 NUMBER 475

# THE UNIVERSITY OF NORTH CAROLINA RECORD

THE ONE HUNDRED AND
FIFTY-SIXTH SESSION

# THE GENERAL CATALOGUE

CATALOGUE ISSUE
1949-1950

*Announcements for the Session*
*1950-1951*

THE UNIVERSITY OF NORTH CAROLINA PRESS
CHAPEL HILL, N C.

# 1950

### JANUARY

| S | M | T | W | T | F | S |
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### MARCH

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### APRIL

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### JUNE

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### JULY

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### AUGUST

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### SEPTEMBER

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### OCTOBER

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### NOVEMBER

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### DECEMBER

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# 1951

### JANUARY

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### FEBRUARY

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### MARCH

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### APRIL

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### MAY

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### JUNE

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### JULY

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### AUGUST

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### SEPTEMBER

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### OCTOBER

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### NOVEMBER

| S | M | T | W | T | F | S |
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### DECEMBER

| S | M | T | W | T | F | S |
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| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

# CALENDAR OF EVENTS

## 1950-1951

FALL QUARTER, 1950

| | |
|---|---|
| September 16-18 | *Saturday-Monday*. Orientation and placement of new students. Registration of freshmen begins. |
| September 19-20 | *Tuesday-Wednesday*. Registration. |
| September 21 | *Thursday*. First day of classes. |
| October 12 | *Thursday*. University Day, half holiday. |
| November 29 | *Wednesday*. Thanksgiving recess begins at 1:00 P.M. |
| December 4 | *Monday*. Thanksgiving recess ends at 8:00 A.M. |
| December 8 | *Friday*. Last day of classes. |
| December 11-15 | *Monday-Friday*. Final examinations. |
| December 16 | *Saturday*. Christmas vacation begins. |

WINTER QUARTER, 1951

| | |
|---|---|
| January 2 | *Tuesday*. Registration of new students. |
| January 3 | *Wednesday*. First day of classes. |
| January 6 | *Saturday*. Classes will meet (in place of classes on Tuesday, January 2). |
| March 10 | *Saturday*. Last day of classes. |
| March 12-16 | *Monday-Friday*. Final examinations. |
| March 16 | *Friday*. Spring recess begins. |

SPRING QUARTER, 1951

| | |
|---|---|
| March 19 | *Monday*. Registration of new students. |
| March 20 | *Tuesday*. First day of classes. |
| March 24 | *Saturday*. Classes will meet (in place of classes on Monday, March 19). |
| May 25 | *Friday*. Last day of classes. |
| May 26, 28-31 | *Saturday, Monday-Thursday*. Final examinations. |
| June 4 | *Monday*. Commencement. |

SUMMER SESSION, 1951

*First Term*

| | |
|---|---|
| June 11 | *Monday*. Registration. |
| June 12 | *Tuesday*. First day of classes. |
| June 16 | *Saturday*. Classes will meet. |
| July 14 | *Saturday*. Classes will meet. |
| July 17 | *Tuesday*. Last day of classes. |
| July 18-19 | *Wednesday-Thursday*. Final examinations. |

*Second Term*

| | |
|---|---|
| July 20 | *Friday*. Registration. |
| July 21 | *Saturday*. First day of classes. |
| August 11 | *Saturday*. Classes will meet. |
| August 25 | *Saturday*. Last day of classes. |
| August 27-28 | *Monday-Tuesday*. Final examinations. |

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*Part One*

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Clyde A. Erwin, State Superintendent of Public Instruction, *ex officio*

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Clyde R. Hoey, Governor, 1937-1941
Robert Gregg Cherry, Governor, 1945-1949

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Edward Stephenson Askew, Bertie
Kemp Davis Battle, Nash
James Albert Bridger, Bladen
Charles Albert Cannon, Cabarrus
Richard Thurmond Chatham, Forsyth
William Grimes Clark, Edgecombe
Arthur Mills Dixon, Gaston
Frank Wills Hancock, Jr., Granville
Charles Andrew Jonas, Lincoln
Arthur Hill London, Chatham
Mrs. Sadie McBrayer McCain, Moore
Frank A. Daniels, Wake
R. Lee Whitmire, Henderson
Reid Atwater Maynard, Alamance
Andrew Lee Monroe, Wake
Kemp Battle Nixon, Lincoln
Annie Moore Cherry, Robeson
John Johnston Parker, Mecklenburg
Robert Wright Proctor, McDowell
Benjamin Franklin Royal, Carteret
William Burden Shuford, Catawba
E. W. Stevens, Duplin
Fred I. Sutton, Lenoir
Mrs. Grace Taylor Rodenbough, Stokes

## Class of April 1, 1953

Wade Barber, Chatham
Samuel Masters Blount, Beaufort
Victor Silas Bryant, Durham
Miss Gertrude Carraway, Craven
John Washington Clark, Randolph

*Deceased, July 31, 1949.

COLLIER COBB, JR., Orange
GEORGE S. COBLE, Davidson
MRS. LAURA WEIL CONE, Guilford
JOHN GILMER DAWSON, Lenoir
JOSEPH C. EAGLES, Wilson
W. ROY HAMPTON, Washington
JOHN SPRUNT HILL, Durham
BENJAMIN KITTRELL LASSITER, Granville
JOHN Q. LEGRAND, New Hanover
HENRY ABEL LINEBERGER, Gaston
MRS. FRANCES NEWSOME MILLER, Wake
GLENN C. PALMER, Haywood
EDWIN PATE, Scotland
JAMES CARLTON PITTMAN, Lee
J. E. RAMSEY, Rowan
ROY ROWE, Pender
JOHN BENTON STACY, Rockingham
KENNETH SPENCER TANNER, Rutherford
WILLIAM BRADLEY UMSTEAD, Durham
E. LEIGH WINSLOW, Perquimans

**Class of April 1, 1955**

HERBERT DALTON BATEMAN, Wilson
WILBUR H. CURRIE, Moore
P. B. FEREBEE, Cherokee
BEN E. FOUNTAIN, Edgecombe
O. MAX GARDNER, JR., Cleveland
H. S. GIBBS, Carteret
A. H. HARRIS, Pamlico
IRA THOMAS JOHNSTON, Ashe
VERNON G. JAMES, Pasquotank
JOHN H. KERR, JR., Warren
JOHN C. KESLER, Rowan
MARK C. LASSITER, Greene
J. SPENCER LOVE, Guilford
WILLIE LEE LUMPKIN, Franklin
HENRY BURWELL MARROW, Johnston
LENNOX POLK MCLENDON, Guilford
WILLIAM DANIEL MERRITT, Person
J. F. MILLIKEN, Union
RUDOLPH I. MINTZ, New Hanover
ROSA B. PARKER, Stanly
CLARENCE POE, Wake
JAMES H. CLARKE, Bladen
GEORGE M. STEPHENS, Buncombe
JOHN WESLEY UMSTEAD, JR., Orange
JOHN G. H. GEITNER, Catawba

**Class of April 1, 1957**

DAVID CLARK, Mecklenburg
K. CLYDE COUNCIL, Columbus
B. B. EVERETT, Halifax
MRS. R. S. FERGUSON, Alexander
JAMES S. FICKLIN, Pitt
JAMES A. GRAY, Forsyth
HARRY A. GREENE, Hoke
F. D. B. HARDING, Yadkin
R. L. HARRIS, Person
LUTHER H. HODGES, Rockingham
MRS. ALBERT LATHROP, Buncombe
R. E. LITTLE, Anson
G. N. NOBLE, Jones
THOMAS J. PEARSALL, Nash
H. L. RIDDLE, JR., Burke
JOHN C. RODMAN, Beaufort

C. WAYLAND SPRUILL, Bertie
MRS. CHARLES W. STANFORD, Orange
JOHN P. STEDMAN, Robeson
H. P. TAYLOR, Anson
W. FRANK TAYLOR, Wayne
MRS. MAY L. TOMLINSON, Guilford
F. E. WALLACE, Lenoir
DAVID LIVINGSTON WARD, Craven
JAMES L. WOODSON, Rowan

**Executive Committee**

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ARCH T. ALLEN, *Secretary*

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*Class of 1952:* Clarence Poe, K. Clyde Council, Thomas J. Pearsall
*Class of 1954:* John W. Umstead, Jr., John W. Clark, O. Max Gardner, Jr.
*Class of 1956:* John Sprunt Hill, Edwin Pate, John J. Parker

# OFFICERS OF ADMINISTRATION

## THE UNIVERSITY OF NORTH CAROLINA
### (Office at Chapel Hill)

A consolidation of the University of North Carolina at Chapel Hill, The State College of Agriculture and Engineering at Raleigh, and The Woman's College of the University of North Carolina at Greensboro.

*Gordon Gray, A.B., LL.B., LL.D., *President*

†Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President*

William Donald Carmichael, Jr., S.B.Comm., *Controller and Acting President*

### The Administrative Council

*The University of North Carolina, Chapel Hill:* Robert Burton House, Gordon Williams Blackwell, William Smith Wells, John Nathaniel Couch, John Brooks Woosley

*The State College of Agriculture and Engineering:* John William Harrelson, Donald Benton Anderson, William Edward Shinn, Clarence Bonner Shulenberger, David E. Henderson

*The Woman's College of the University of North Carolina:* Walter Clinton Jackson, Albert S. Keister, Leonard Burwell Hurley, Elizabeth Duffy, Florence Schaeffer

## THE UNIVERSITY OF NORTH CAROLINA
## CHAPEL HILL

### General Administrative Officers

Robert Burton House, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

Almonte Charles Howell, Ph.D., *Secretary of the Faculty*

William Smith Wells, Ph.D., *Chairman pro tempore of the Faculty*

Julius Algernon Warren, *Treasurer*

Claude Edward Teague, A.B., *Assistant Controller and Business Manager*

### Deans of Instruction

William Smith Wells, Ph.D., *Dean of the College of Arts and Sciences and Chairman of the Committee on Instruction*

---

*Elected February 6, 1950, by the Board of Trustees.

†Resigned March 29, 1949, to accept appointment as United States senator from North Carolina.

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Dean of the General College*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

*DUDLEY DEWITT CARROLL, M.A., *Dean of the School of Commerce*

HENRY PARKER BRANDIS, A.B. LL.B., *Dean of the School of Law*

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

†MARION LEE JACOBS, Ph.D., *Dean of the School of Pharmacy*

MISS SUSAN GREY AKERS, Ph.D., *Dean of the School of Library Science*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

GUY B. PHILLIPS, M.A., *Dean of the School of Education*

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MARCELLA CAROLINE HARRER, *Assistant Personnel Adviser to Women*

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RAYMOND LEWIS JEFFERIES, JR., A.B., *Assistant to the Dean of Students*

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ELIZABETH PARKER, M.A., *Assistant Director of Placement*

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FREDERICK CARLYLE SHEPARD, Ph.D., *Adviser to Veterans*

WILLIAM DECATUR PERRY, Ed.D., *Director of University Testing Service*

---

*Resigned as Dean effective August 31, 1950.
†Deceased, March 19, 1950.
‡Absent on leave, 1949-1950.
§Acting Dean of Students, 1949-1950.

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GAY WILSON CURRIE, B.A., B.S., R.N., *Secretary of the Y.W.C.A.*

EDWIN SIDNEY LANIER, *Director of Student Aid Office*

ROBERT M. WATSON, JR., *Acting Director of Graham Memorial*

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WILLIAM PORTER KELLAM, A.M., A.B. in L.S., *Assistant Librarian*

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JOSEPH MARYON SAUNDERS, A.M., *Alumni Secretary*

ROBERT WILSON MADRY, A.B., B.Litt., *Director, The University News Bureau*

LAMBERT DAVIS, M.A., *Director, The University of North Carolina Press*

GLEN HAYDON, Ph.D., *Director, Hill Hall of Music*

JOHN VOLNEY ALLCOTT, M.A., *Director, Person Hall Art Gallery*

EARL WYNN, M.S., *Director, Communication Center*

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A.B., 1930, LL.D., 1949 (North Carolina); LL.B., 1933 (Yale)

†Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President of the University of North Carolina*

A.B., 1909 (North Carolina); M.A., 1916 (Columbia); LL.D. (Birmingham-Southern, Davidson, Duke, William and Mary, Wake Forest, Harvard, Amherst, Princeton, Temple, Dartmouth); D.C.L. (Catawba); D.Litt. (Columbia)

William Donald Carmichael, Jr., S.B.Comm., *Controller and Acting President of the University of North Carolina*

S.B.Comm., 1921 (North Carolina)

Robert Burton House, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

A.B., 1916 (North Carolina); A.M., 1917 (Harvard); LL.D. (Catawba, Bowdoin)

By action of the Trustees of the University, the General Faculty includes all members of the University's teaching force above the rank of instructor and all general administrative officers of the institution. In the President and the General Faculty is vested final authority (under the Trustees) over all matters of University policy and activity. Under the General Faculty the colleges and the schools have separate faculties and administrative boards, which have final authority over matters pertaining solely to such colleges or schools. In the following list are included the names of all members of the General Faculty who have not been listed under Officers of Administration, the names of all administrative officers who also do actual teaching, and the names of all instructors and part-time instructors. The names are arranged in alphabetical order.

‡Agatha Boyd Adams, A.B., A.M., *Library Extension Associate Librarian*

A.B., 1915 (Randolph Macon); A.M., 1924, A.B. in L.S., 1939 (North Carolina)

Elie Maynard Adams, Ph.D., *Assistant Professor of Philosophy*

A.B., 1941, M.A., 1944 (University of Richmond); B.D., 1944 (Colgate-Rochester Divinity School); A.M., 1947, Ph.D., 1948 (Harvard)

Joseph Edison Adams, Ph.D., *Professor of Botany*

Ph.G., 1925, Ph.Ch., 1927 (College of Pharmacy, Columbia); B.S., 1929 (Michigan); M.A., 1932 (Columbia); Ph.D., 1935 (California)

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*Elected February 6, 1950, by the Board of Trustees.

†Resigned March 29, 1949, to accept appointment as United States senator from North Carolina.

‡Deceased, March 17, 1950.

NICHOLSON BARNEY ADAMS, Ph.D., *Professor of Spanish*
A.B., 1915 (Washington and Lee); M.A., 1920, Ph.D., 1922 (Columbia)

RAYMOND WILLIAM ADAMS, Ph.D., *Professor of English*
A.B., 1920 (Beloit); A.M., 1921, Ph.D., 1928 (North Carolina)

DOROTHY C. ADKINS, Ph.D., *Professor of Psychology*
B.S., 1931, Ph.D., 1937 (Ohio State)

THOMAS WORTHEN AIKEN, B.A., *Part-time Instructor in Political Science*
B.A., 1946 (American University)

SUSAN GREY AKERS, Ph.D., *Professor of Library Science and Dean of the School of Library Science*
A.B., 1909 (Kentucky); Certificate, 1913 (Library School, Wisconsin); Ph.D., 1932 (Chicago)

FRANCIS LEE ALBERT, JR., A.B., *Part-time Instructor in English*
A.B., 1947 (Harvard)

EDGAR ALDEN, M.M., *Part-time Instructor in Music*
B.M., 1936, M.M., 1940 (Oberlin)

SYDENHAM BENONI ALEXANDER, A.B., M.D., *Instructor in Medicine and Associate University Physician*
A.B., 1941 (North Carolina); M.D., 1944 (Medical College of Virginia)

JOHN VOLNEY ALLCOTT, M.A., *Professor of Art*
Ph.B., 1928 (Wisconsin); M.A., 1936 (Chicago)

ERNEST MARVIN ALLEN, JR., A.M., *Assistant Professor of Physical Education*
A.B., 1938, A.M., 1940 (North Carolina)

JOHN ALEXANDER ALLEN, A.B., B.A., *Part-time Instructor in English*
A.B., 1943 (Swarthmore); B.A., 1948 (Oxford)

WALTER ALLEN, JR., Ph.D., *Professor of Latin*
A.B., 1932 (Wesleyan); Ph.D., 1936 (Yale)

*BERNHARD W. ANDERSON, Ph.D., B.D., *Associate Professor of Biblical Literature on the James A. Gray Foundation*
A.B., 1936 (College of the Pacific); A.M., 1938, B.D., 1939 (Pacific School of Religion); Ph.D., 1945 (Yale)

FRANK WALTER ANDERSON, A.M., *Part-time Instructor in English*
A.B., 1947 (Birmingham-Southern); A.M., 1948 (North Carolina)

JOHN ANDRAKO, S.M., *Part-time Instructor in Pharmaceutical Chemistry*
S.B. in Phar., 1947, S.M., 1949 (Rutgers)

JAMES CLARENCE ANDREWS, Ph.D., *Professor of Biological Chemistry and Nutrition*
B.S. in Chem., 1915 (Iowa); Ph.D., 1918 (Columbia)

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*Resigned, effective August 31, 1950.

ANTONIAS ANTONAKOS, S.M., *Lecturer in Physics*
B.S., 1929 (High Point College); S.M., 1934 (North Carolina)

HARRY ARMOGIDA, M.A., *Assistant Professor of Education*
B.A., 1938, B.S., 1940, M.A., 1941 (Ohio State)

LOWELL DEWITT ASHBY, Ph.D., *Associate Professor of Economics*
A.B., 1936 (Hastings College); M.A., 1938 (Nebraska); Ph.D., 1948 (Wisconsin)

PAUL FLESHER ASHBY, Ph.D., *Visiting Lecturer in Political Science*
A.B., 1930 (Washington); M.A., 1932 (American University); Ph.D., 1949 (Chicago)

EARLENE ATCHISON, Ph.D., *Assistant Professor of Botany*
A.B., 1941 (Huntingdon College); M.A., 1943 (Alabama); Ph.D., 1946 (Virginia)

JAMES W. AUSTIN, JR., A.B., *Lieutenant Commander, U. S. Navy, Assistant Professor of Naval Science*
A.B., 1938 (North Carolina)

EDITH EUGENIA AVERITT, A.B., A.B. in L.S., *Geology Librarian*
A.B., 1925, A.B. in L.S., 1934 (North Carolina)

WILLIAM BRANTLEY AYCOCK, A.M., J.D., *Assistant Professor of Law*
B.S., 1936 (North Carolina State College); A.M., 1937, J.D., 1948 (North Carolina)

HERBERT RALPH BAER, A.B., LL.B., *Professor of Law*
A.B., 1923 (Cornell); LL.B., 1926 (Harvard)

ENGLISH BAGBY, Ph.D., *Professor of Psychology*
A.B., 1913, A.M., 1914 (Princeton); Ph.D., 1918 (Johns Hopkins)

JAMES OSLER BAILEY, Ph.D., *Associate Professor of English*
A.B., 1924, A.M., 1927, Ph.D., 1934 (North Carolina)

HERMAN GLENN BAITY, Sc.D., *Professor of Sanitary Engineering*
A.B., 1917, S.B. in C.E., 1922 (North Carolina); S.M., 1925, Sc.D., 1928 (Harvard)

HAL LACKEY BALLEW, A.M., *Instructor in Spanish*
A.B., 1947, A.M., 1949 (North Carolina)

LEE ARMISTEAD BARCLAY, B.S., *Instructor in Accounting*
B.S., 1943 (Alabama)

ADDISON ROBY BARKER, JR., A.B., *Part-time Instructor in English*
A.B., 1949 (High Point)

GERALD ALAN BARRETT, A.B., LL.B., *Associate Professor of Business Law and Adviser in the General College*
A.B., 1933 (Lehigh); LL.B., 1936 (Columbia)

DAVID GIOVANNI BASILE, M.A., *Assistant Professor of Geography*
A.B., 1936 (Washington and Lee); M.A., 1939 (Columbia)

WILLIAM HARRELL BASKIN III, A.B., *Instructor in French*
A.B., 1949 (North Carolina)

*MARVIN C. BASS, B.S., *Assistant Football Coach and Instructor in Physical Education*
B.S., 1943 (William and Mary)

CHARLES DALE BEERS, Ph.D., *Professor of Zoology*
A.B., 1921, A.M., 1922 (North Carolina); Ph.D., 1925 (Johns Hopkins)

OTIS CARRINGTON BEESON, JR., A.B., *Instructor in French*
A.B., 1949 (North Carolina)

GEORGE FERDINAND BENTLEY, A.B., B.S. in L.S., *Circulation Librarian*
A.B., 1937 (Vanderbilt); B.S. in L.S., 1941 (Peabody)

MICHAEL KALEN BERKUT, B.S., *Instructor in Biological Chemistry and Nutrition*
B.S., 1941 (N.C. State College of Agriculture and Engineering)

EDWARD CLARK BERRY, S.B., *Part-time Instructor in Geology*
S.B., 1948 (North Carolina)

WALTER REECE BERRYHILL, A.B., M.D., *Professor of Clinical Medicine and Dean of the School of Medicine*
A.B., 1921 (North Carolina); M.D., 1927 (Harvard)

HAROLD A. BIERCK, JR., Ph.D., *Assistant Professor of History*
B.A., 1938, M.A., 1940, Ph.D., 1944 (University of California at Los Angeles)

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*
A.B., 1932 (Furman); A.M., 1933 (North Carolina); A.M., 1937, Ph.D., 1940 (Harvard)

ROBERT J. BLACKWELL, A.B., *Part-time Instructor in Physics*
A.B., 1947 (Texas Christian)

JAMES CYRIL DICKSON BLAINE, Ph.D., *Associate Professor of Business Administration*
B.Comm., 1934 (Queen's University, Canada); S.M., 1939, Ph.D., 1941 (North Carolina)

CHARLES BARKLEY BLAIR, JR., A.B., *Instructor in Zoology*
A.B., 1938 (Maryville College)

MARGARET BLEE, M.Ed., *Associate Professor of Public Health Nursing*
B.S., 1933 (Missouri); M.Ed., 1941 (Mills College)

CARL S. BLYTH, A.M., *Instructor in Physical Education*
B.S., 1947 (Lenoir Rhyne); A.M., 1948 (North Carolina)

†RALPH STEELE BOGGS, Ph.D., *Professor of Spanish*
Ph.B., 1926, Ph.D., 1930 (Chicago)

RICHMOND PUGH BOND, Ph.D., *Professor of English*
A.B., 1920 (Vanderbilt); A.M., 1923, Ph.D., 1929 (Harvard)

RAJ CHANDRA BOSE, D.Litt., *Professor of Mathematical Statistics*
M.A., 1927, D.Litt., 1947 (University of Calcutta)

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*Resigned, February 1, 1950.
†Resigned, effective September 1, 1950.

RALPH WALTON BOST, Ph.D., *Smith Professor of Chemistry*
A.B., 1923 (Newberry); A.M., 1924, Ph.D., 1928 (North Carolina)

WAYNE A. BOWERS, Ph.D., *Associate Professor of Physics*
A.B., 1938 (Oberlin); Ph.D., 1943 (Cornell)

FRANK OTTO BOWMAN, JR., A.B., S.B., *Part-time Instructor in Geology*
A.B., 1941 (Williams College); S.B., 1942 (North Carolina)

PAUL WELDON BOYLES, A.B., S.M., *Part-time Instructor in Physiology*
A.B., 1947 (Duke); S.M., 1949 (North Carolina)

WILLIAM BRAGAW, A.B., *Part-time Instructor in Political Science*
A.B., 1947 (North Carolina)

HENRY PARKER BRANDIS, JR., A.B., LL.B., *Professor of Law and Dean of the School of Law*
A.B., 1928 (North Carolina); LL.B., 1931 (Columbia)

WALLACE REID BRANDON, A.B., *Instructor in French*
A.B., 1948 (Florida Southern College)

ALFRED THEODOR BRAUER, Ph.D., *Professor of Mathematics*
Ph.D., 1928 (Berlin)

*JOHN CHARLES BRAUER, A.B., M.Sc., D.D.S., *Professor of Pedodontics and Dean of the School of Dentistry*
D.D.S., 1928, A.B., 1934, M.Sc., 1936 (Nebraska)

EDWARD ARMOND BRECHT, Ph.D., *Professor of Pharmacy*
B.S. in Pharmacy, 1933, M.S., 1934, Ph.D., 1939 (Minnesota)

MILLARD SHERIDAN BRECKENRIDGE, Ph.B., LL.B., *Professor of Law*
Ph.B., 1917 (Chicago); LL.B., 1918 (Yale)

KING WILLIAM BRETT, S.B., *Part-time Instructor in Geology*
S.B., 1949 (North Carolina)

KENNETH MERLE BRINKHOUS, B.A., M.D., *Professor of Pathology*
B.A., 1929, M.D., 1932 (Iowa)

ARTHUR V. BRISKIN, M.A., *Assistant Professor of Radio*
A.A., 1942 (Wright College); E.E., 1944 (Calif. Tech.); B.S., 1946 (Columbia); B.A., 1947, M.A., 1948 (Michigan State)

ALFRED CARTER BROAD, A.B., *Instructor in the Institute of Fisheries Research*
A.B., 1943 (North Carolina)

EDITH PERRYMAN BROCKER, R.N., B.S.P.H.N., *Visiting Instructor in Public Health Nursing*
R.N., 1930 (Pennsylvania); B.S.P.H.N., 1944 (North Carolina)

EARLE W. BROCKMAN, JR., A.M., *Instructor in French*
A.B., 1940, A.M., 1949 (North Carolina)

CHARLES BUTLER BROCKMANN, A.B., *Instructor in French*
A.B., 1949 (North Carolina)

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*Beginning January 1, 1950.

JOHN CARUTHERS BRODERICK, A.M., *Part-time Instructor in English*
A.B., 1948 (Southwestern); A.M., 1949 (North Carolina)

LEE MARSHALL BROOKS, Ph.D., *Professor of Sociology*
A.B., 1925 (Boston); A.M., 1926, Ph.D., 1929 (North Carolina)

ERNEST ALLAN BROWN, A.M., *Part-time Instructor in English*
A.B., 1941, A.M., 1947 (North Carolina)

ROY MELTON BROWN, Ph.D., *Professor of Public Welfare Administration, Emeritus*
A.B., 1906, A.M., 1921, Ph.D., 1929 (North Carolina)

EDWARD TANKARD BROWNE, Ph.D., *Professor of Mathematics*
B.A., 1915, M.A., 1917 (Virginia); Ph.D., 1926 (Chicago)

EDWARD TANKARD BROWNE, JR., A.B., *Part-time Instructor in Botany*
A.B., 1948 (North Carolina)

HARRY DAVIS BRUNER, Ph.D., M.D., *Visiting Professor of Radiobiology*
B.S., 1932, M.D., 1934, M.S., 1936 (Louisville); Ph.D., 1939 (Chicago)

HOYLE SANDERS BRUTON, A.B., *Part-time Instructor in English*
A.B., 1947 (North Carolina)

ALBERT HUGHES BRYAN, B.S., M.D., *Professor of Public Health Nutrition*
B.S., 1927, M.D., 1931 (Harvard)

MARJORIE PARSONS BRYANT, B.A., B.S., *Part-time Instructor in Physics*
B.A., 1947, B.S., 1949 (Chicago)

DANIEL HOUSTON BUCHANAN, Ph.D., *Professor of Economics*
Litt.B., 1909 (Sterling College); A.B., 1911 (Colorado College); A.M., 1912 (Harvard); D.Sc.Econ., 1928 (Keiogijuku Univ., Tokyo); Ph.D., 1931 (Harvard)

EVERETT IRVING BUGG, M.D., *Lecturer in Orthopedic Surgery*
M.D., 1937 (Johns Hopkins)

JAMES BELL BULLITT, M.A., M.D., *Professor of Pathology, Emeritus*
B.A., 1894, M.A., 1895 (Washington and Lee); M.D., 1897 (Virginia)

WILLIAM D. BULLOCH, B.A., *Part-time Instructor in Physics*
B.A., 1946 (Dartmouth College)

ROBERT LOGAN BUNTING, A.M., *Assistant Professor of Economics*
A.M., 1948 (Chicago)

GEORGE CHARLES CALDWELL, A.B., *Part-time Instructor in Mathematics*
A.B., 1942 (North Carolina)

JAMES ROY CALDWELL, A.M., *Instructor in Social Science*
A.B., 1931 (Davidson); A.M., 1937 (North Carolina)

WALLACE EVERETT CALDWELL, Ph.D., *Professor of Ancient History*
A.B., 1910 (Cornell); Ph.D., 1919 (Columbia)

RICHARD PERCIVAL CALHOON, M.A., *Professor of Business Administration*
A.B., 1930, M.A., 1932 (University of Pittsburgh)

EDWARD ALEXANDER CAMERON, Ph.D., *Professor of Mathematics*
A.B. in Educ., 1928, A.M., 1929, Ph.D., 1936 (North Carolina)

FRANK KENNETH CAMERON, Ph.D., *Professor of Chemistry, Emeritus*
A.B., 1891, Ph.D., 1894 (Johns Hopkins)

JAMES VERNON CAMP, A.M., *Assistant Football Coach*
A.B., 1947, A.M., 1948 (North Carolina)

DANIEL CAMPBELL, A.B., *Part-time Instructor in Psychology*
A.B., 1943 (North Carolina)

KATHERINE KENNEDY CARMICHAEL, Ph.D., *Dean of Women*
A.B., 1932 (Birmingham-Southern); M.A., 1939, Ph.D., 1943 (Vanderbilt)

GEORGE WILLIAM CAROW, A.B., *Part-time Instructor in Mathematics*
A.B., 1949 (Swarthmore)

NOEL CARPENTER, B.S., *Captain, U. S. Air Force, Assistant Professor of Air Science and Tactics*
B.S., 1941 (Alabama)

*DUDLEY DEWITT CARROLL, M.A., *Professor of Economics and Dean of the School of Commerce*
A.B., 1907 (Guilford); A.B., 1908 (Haverford); M.A., 1915 (Columbia)

JOHN ERWIN CARROLL, JR., A.M., *Instructor in French*
B.S., 1923 (The Citadel); A.M., 1928 (North Carolina)

†THOMAS H. CARROLL, B.S., M.B.A., D.C.S., *Professor of Business Administration and Dean of the School of Business Administration*
B.S., 1934 (California); M.B.A., 1936, D.C.S., 1939 (Harvard Graduate School of Business Administration)

CLYDE CASS CARTER, Ph.D., *Associate Professor of Business Law and Adviser in the General College*
A.B., 1925 (Emory and Henry); M.A., 1928 (Vanderbilt); LL.B., 1935 (Wilmington Law School); Ph.D., 1942 (North Carolina)

ISABELLE KIRKLAND CARTER, B.S., M.S.S., *Associate Professor of Social Work*
B.S., 1924 (Boston); M.S.S., 1925 (Smith College School of Social Work)

JOEL J. CARTER, M.A., *Assistant Professor of Music*
A.B., 1935 (San Jose State College); M.A., 1947 (Stanford)

LESLIE RALPH CASEY, A.M., *Instructor in Physical Education*
A.B., 1946, A.M., 1949 (North Carolina)

IRA COLUMBUS CASTLES, A.M., *Part-time Instructor in Economics*
B.S., 1934 (Louisiana State); A.M., 1948 (Columbia)

CORNELIUS OLIVER CATHEY, Ph.D., *Assistant Professor of History*
A.B., 1928, M.A., 1929 (Davidson College); Ph.D., 1948 (North Carolina)

CONSTANTINE P. CAVARNOS, Ph.D., *Assistant Professor of Philosophy*
A.B., 1942, A.M., 1947, Ph.D., 1948 (Harvard)

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*Resignation as Dean of the School of Commerce effective August 31, 1950.
†Beginning September 1, 1950.

EMIL THEODORE CHANLETT, M.S.S.E., *Associate Professor of Sanitary Engineering*

B.S., 1937 (College of the City of New York); M.S.P.H., 1939 (Columbia); M.S.S.E., 1941 (North Carolina)

FRANCIS STUART CHAPIN, JR., A.B., B.Arch., M.C.P., *Associate Professor of Planning and Research Associate in the Institute for Research in Social Science*

A.B., 1937 (Minnesota); B.Arch., 1939, M.C.P., 1940 (Massachusetts Institute of Technology)

PHILIP MACON CHEEK, Ph.D., *Assistant Professor of English*

A.B., 1927, A.M., 1928, Ph.D., 1931 (North Carolina)

ALPHONSE F. CHESTNUT, Ph.D., *Associate Professor in the Institute of Fisheries Research*

B.S., 1941 (William and Mary); M.S., 1943, Ph.D., 1949 (Rutgers)

*SIDNEY SHAW CHIPMAN, B.A., M.D.C.M., M.P.H., *Professor of Maternal and Child Health*

B.A., 1924 (Acadia University); M.D.C.M., 1928 (McGill University); M.P.H., 1947 (Yale)

TALBOT ALBERT CHUBB, A.B., *Part-time Instructor in Physics*

A.B., 1944 (Princeton)

†HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Medical Affairs*

A.B., 1937 (North Carolina); M.D., 1941 (Rochester)

CHARLES MORGAN CLARKE, Ph.D., *Assistant Professor of Education*

A.B., 1936 (Henderson State Teachers College); M.A., 1938 (Louisiana State University); Ph.D., 1948 (North Carolina)

GORDON BAYLOR CLEVELAND, M.S., *Part-time Instructor in Political Science*

B.S., 1938 (Davidson); M.S., 1947 (Alabama Polytechnic Institute)

ALBERT COATES, A.B., LL.B., *Professor of Law and Director of the Institute of Government*

A.B., 1918 (North Carolina); LL.B., 1923 (Harvard)

WILLIAM MCWHORTER COCHRANE, A.B., LL.B., *Assistant Director of the Institute of Government*

A.B., 1939, LL.B., 1941 (North Carolina)

JOFFRE LANNING COE, M.A., *Instructor in Anthropology and Director of the Laboratory of Anthropology*

A.B., 1944 (North Carolina); M.A., 1948 (Michigan)

FREDERIC EDWARD COENEN, Ph.D., *Associate Professor of German*

A.B., 1928, A.M., 1930 (Arizona); Ph.D., 1936 (North Carolina)

OSCAR JACKSON COFFIN, A.B., *Professor of Journalism*

A.B., 1909 (North Carolina)

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*Beginning May 15, 1950.
†Beginning April 1, 1950.

GEORGE RALEIGH COFFMAN, Ph.D., *Kenan Professor of English*
A.B., 1903 (Drake); A.M., 1909 (Harvard); Ph.D., 1913 (Chicago)

ROBERT ERVIN COKER, Ph.D., Sc.D., *Kenan Professor of Zoology*
S.B., 1896, S.M., 1897 (North Carolina); Ph.D., 1906 (Johns Hopkins); Sc.D. (South Carolina)

WILLIAM CHAMBERS COKER, Ph.D., LL.D., D.Sc., *Kenan Research Professor of Botany, Emeritus*
B.S., 1894 (South Carolina); Ph.D., 1901 (Johns Hopkins); LL.D. (South Carolina); D.Sc., (North Carolina)

*ROBERT DIGGES WIMBERLY CONNOR, Ph.B., LL.D., D.Litt., *Craige Professor of Jurisprudence and History, Emeritus*
Ph.B., 1899 (North Carolina); LL.D. (Duke, North Carolina); D.Litt. (Lenoir-Rhyne)

OLAN VICTOR COOK, A.B., A.B. in L.S, *Associate Professor, Assistant Librarian, and Curator of Rare Books*
A.B., 1929, A.B. in L.S., 1932 (North Carolina)

ALBERT DERWIN COOPER, A.B., M.D., *Visiting Assistant Professor of Public Health*
A.B., 1932, M.D., 1931 (George Washington)

J. ELLIOTT COOPER, B.S., *Captain, U. S. Navy, Professor of Naval Science*
B.S., 1926 (U.S. Naval Academy)

JAMES ISAAC COPELAND, A.B., B.S. in L.S., M.A., *Documents Librarian*
A.B., 1931 (Presbyterian College); B.S. in L.S., 1932, M.A., 1934 (Peabody)

WILLIAM MAURICE COPPRIDGE, M.D., *Instructor in Medicine*
M.D., 1918 (Jefferson Medical College)

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education*
A.B., 1920 (Wittenberg College); M.A., 1929 (Ohio State); Ed.D., 1948 (Catawba)

DONALD PAUL COSTELLO, Ph.D., *Kenan Professor of Zoology*
A.B., 1930 (College of the City of Detroit); Ph.D., 1934 (Pennsylvania)

LYMAN ATKINSON COTTEN, Ph.D., *Associate Professor of English*
A.B., 1936 (North Carolina); Ph.D., 1941 (Yale)

JOHN NATHANIEL COUCH, Ph.D., Sc.D., *Kenan Professor of Botany*
A.B., 1919, A.M., 1922, Ph.D., 1924 (North Carolina); ScD., 1946 (Catawba College)

DUDLEY JOHNSTONE COWDEN, Ph.D., *Professor of Economic Statistics*
A.B., 1919 (Grinnell College); A.M., 1922 (Chicago); Ph.D., 1931 (Columbia)

PORTER COWLES, A.B., *Assistant Director of the University of North Carolina Press*
A.B., 1933 (North Carolina)

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*Deceased, February 25, 1950.

HARDIN CRAIG, Ph.D., Litt.D., *Professor of English, Emeritus*
A.B., 1897 (Centre College); A.M., 1899, Ph.D., 1901 (Princeton); Litt.D., (Centre College); F.R.S.L.

HARRY WOLVEN CRANE, Ph.D., *Professor of Psychology and Psychological Consultant*
A.B., 1909, A.M., 1910, Ph.D., 1913 (Michigan)

*WALTER DÉVREUX CREECH, A.M., *Instructor in French*
A.B., 1928, A.M., 1930 (North Carolina); Certificate, University of Lyons (1932), University of Bordeaux (1933)

†LEO PAUL CRESPI, Ph.D., *Professor of Social Psychology and Research Professor in the Institute for Research in Social Science*
A.B., 1938 (U.C.L.A.); M.A., 1941, Ph.D., 1942 (Princeton)

HORACE DOWNS CROCKFORD, Ph.D., *Professor of Chemistry*
B.S., 1920 (N. C. State College of Agriculture and Engineering); S.M., 1923, Ph.D., 1926 (North Carolina)

JOAN MCELLIGOTT CRONIN, M.A., *Part-time Instructor in English*
A.B., 1943 (Good Counsel); M.A., 1946 (Fordham)

ROBERT WILLINGHAM CRUTCHFIELD, S.M., C.P.A., *Associate Professor of Accounting*
A.B., 1930 (Wake Forest College); S.M., 1939 (North Carolina); C.P.A. (State of North Carolina)

MORITA CRYMES, B.S. in Mech. Eng., *Part-time Instructor in Physics*
B.S. in Mech. Eng., 1946 (South Carolina)

HORACE HERNDON CUNNINGHAM, A.M., *Instructor in Social Science*
A.B., 1936 (Atlantic Christian College); A.M., 1940 (North Carolina)

JOHN PERCY DALZELL, A.B., LL.B., *Professor of Law*
A.B., 1922, LL.B., 1924 (Minnesota)

WILLIAM JOHN DANIEL, Ph.D., *Associate Professor of Psychology*
A.B., 1938 (Antioch College); Ph.D., 1942 (North Carolina)

WILLIAM MOYE DARDEN, A.M., *Instructor in Social Science*
A.B., 1942, A.M., 1947 (North Carolina)

‡JOHN FREDERICK DASHIELL, Ph.D., D.Sc., *Kenan Professor of Psychology*
B.S., 1908, B.Litt., 1909, D.Sc., 1949 (Evansville College); M.S., 1910, Ph.D., 1913 (Columbia)

ALEXANDER SHUFORD DAVIS, A.B., *Part-time Instructor in Mathematics*
A.B., 1947 (North Carolina)

EMMA LU DAVIS, A.B., *Visiting Sculptor*
Diploma, 1920 (The Pennsylvania Academy of Fine Arts); A.B., 1927 (Vassar)

HARRY ELLERBE DAVIS, M.A., *Professor of Dramatic Art and Associate Director of The Carolina Playmakers*
A.B., 1927 (South Carolina); M.A., 1940 (Columbia)

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*Absent on leave, fall and winter quarters, 1949-1950.
†Beginning September 1, 1950.
‡Absent on leave, 1949-1950.

KENNETH R. DAVIS, Ph.B., M.B.A., *Assistant Professor of Marketing*
Ph.B., 1946, M.B.A., 1947 (Wisconsin)

LAMBERT DAVIS, M.A., *Director of the University of North Carolina Press*
B.A., 1925, M.A., 1926 (Virginia)

MILDRED WINSOR DAVIS, A.B., A.B. in L.S., *Serials Librarian*
A.B., 1931 (Louisiana State); A.B. in L.S., 1936 (North Carolina)

SANDFORD SELLERS DAVIS, A.M., *Assistant Professor of Education*
A.B., B.S., 1934 (Central Missouri State College); A.M., 1941 (Missouri)

JOSEPH G. DAWSON, Ph.D., *Assistant Professor of Psychology*
A.B., 1940 (North Carolina); A.M., 1947, Ph.D., 1949 (Chicago)

FRANCIS BERNIEL DEDMOND, A.B., Th.M., *Part-time Instructor in English*
A.B., 1940 (Catawba); Th.M., 1945 (Southern Baptist Theological Seminary)

GOLDIE DEMB, A.B., *Part-time Instructor in Psychology*
A.B., 1949 (Iowa)

NICHOLAS JAY DEMERATH, Ph.D., *Professor of Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1934 (DePauw); A.M., 1938, Ph.D., 1942 (Harvard)

WILLIAM MORTON DEY, Ph.D., *Kenan Professor of the Romance Languages and Literatures*
B.A., M.A., 1902 (Virginia); A.M., 1904, Ph.D., 1906 (Harvard)

GEORGE O. DOAK, Ph.D., *Associate Professor of Experimental Medicine*
B.S. in Chemistry, 1929, B.S. in Pharmacy, 1930 (Saskatchewan); M.S., 1932, Ph.D., 1934 (Wisconsin)

AUSTIN CHARLES DOBBINS, A.M., *Part-time Instructor in English*
A.B., 1941 (Mississippi College); A.M., 1948 (North Carolina)

JAMES TALMAGE DOBBINS, Ph.D., *Professor of Chemistry*
A.B., 1911, A.M., 1912, Ph.D., 1914 (North Carolina)

LOUIS EDGAR DOLLARHIDE, A.M., *Part-time Instructor in English*
A.B., 1942 (Mississippi College); A.M., 1946 (Harvard)

EDWARD THAYER DRAPER-SAVAGE, *Instructor in French*

BERTRAM MORRIS DRUCKER, A.M., *Instructor in Mathematics*
A.B., 1940, A.M., 1946 (North Carolina)

FRANK MARION DUFFEY, A.M., *Instructor in Spanish*
A.B., 1938 (Miami University); A.M., 1940 (North Carolina)

ROBERT YALE DURAND, A.B., M.B.A., *Assistant Professor of Economics*
A.B., 1934 (Oberlin); M.B.A., 1941 (Harvard)

JOHN EDWARD DYKSTRA, C.E., M.B.A., D.C.S., *Professor of Business Administration*
C.E., 1930 (Rensselaer); M.B.A., 1932, D.C.S., 1936 (Harvard)

CHARLES EDWARD EATON, A.M., *Assistant Professor of English*
A.B., 1936 (North Carolina); A.M., 1940 (Harvard)

WALTER PRICHARD EATON, M.A., *Visiting Lecturer in Dramatic Art*
A.B., 1900 (Harvard); M.A., 1945 (Yale)

FLOYD HARRIS EDMISTER, Ph.D., *Professor of Chemistry and Adviser in the General College*
B.S., 1912, Ph.D., 1918 (Syracuse); M.S., 1913 (Louisiana State)

NORMAN ELLSWORTH ELIASON, Ph.D., *Professor of English*
A.B., 1927 (Luther College); M.A., 1931 (Iowa); Ph.D., 1936 (Johns Hopkins)

LUCILE MARSHALL ELLIOTT, B.Pd., *Law Librarian*
B.Pd., 1912 (Woman's College, U.N.C.)

FRED WILSON ELLIS, Ph.D., *Associate Professor of Pharmacology*
B.S., 1936 (South Carolina); Ph.D., 1941 (Maryland)

G. GORDON ELLIS, Ph.D., *Associate Professor of Education*
A.B., 1937, (Iowa State Teachers College); M.A., 1940, Ph.D., 1948 (Wisconsin)

WILLIAM ANDREW ELLISON, JR., A.M., *Associate Professor and Director of the Institute of Fisheries Research*
A.B., 1923, A.M., 1924 (Trinity College)

*JOHN VAN GAASBEEK ELMENDORF, A.M., *Instructor in French and Spanish*
A.B., 1937, A.M., 1947 (North Carolina)

MAURICE ELSTUN, A.M., *Instructor in Spanish*
A.B., 1940 (Miami University); A.M., 1948 (North Carolina)

STEPHEN ALBERT EMERY, Ph.D., *Professor of Philosophy*
A.B., 1923, Ph.D., 1928 (Cornell)

SAMUEL THOMAS EMORY, Ph.D., *Professor of Geography*
A.B., 1917, A.M., 1918 (Randolph-Macon College); M.A., 1921 (Columbia); Ph.D., 1939 (Chicago)

WILLIAM LOUIS ENGELS, Ph.D., *Associate Professor of Zoology*
B.S., 1930 (Notre Dame); Ph.D., 1937 (California)

ALFRED GARVIN ENGSTROM, Ph.D., *Associate Professor of French*
A.B., 1933, A.M., 1935, Ph.D., 1941 (North Carolina)

PRESTON HERSCHEL EPPS, Ph.D., *Professor of Greek*
A.B., 1915, A.M., 1917 (North Carolina); Ph.D., 1928 (Chicago)

CHARLES PERRY ERICKSON, B.S. in Civ. Eng'g., *Assistant Director of Athletics and Instructor in Physical Education*
B.S. in Civ. Eng'g., 1931 (North Carolina)

GEORGE HYNDMAN ESSER, JR., B.S., LL.B., *Assistant Director of the Institute of Government*
B.S., 1942 (Virginia Military Institute); LL.B., 1948 (Harvard)

GEORGIA HICKS FAISON, A.B., B.L.S., *Reference Librarian*
A.B., 1911 (Woman's College, U.N.C.); B.L.S., 1924 (New York State Library School)

PRESTON COOKE FARRAR, M.A., *Professor of Education, Emeritus*
A.B., 1891 (Washington and Jefferson College); M.A., 1904 (Columbia)

---

*Resigned, January 1, 1950.

JOHN HOWARD FERGUSON, M.A., M.D., L.M.S.S.A., F.A.C.P., *Professor of Physiology*
B.A., 1921 (Capetown); B.A., 1925, M.A., 1931 (Oxford); M.D., 1928 (Harvard); L.M.S.S.A., 1931 (London); F.A.C.P., 1945

*JAMES WILLIAM FESLER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*
A.B., 1932 (Minnesota); A.M., 1933, Ph.D., 1935 (Harvard)

ROBERT ALLISON FETZER, B.S., M.A., B.S. in Elec. and Mech. Eng'g., *Director of Physical Education and Athletics*
B.S., 1907, M.A., 1908 (Davidson College); B.S. in Elec. and Mech. Eng'g., 1909 (Clemson)

ARTHUR EMIL FINK, Ph.D., M.S.W., *Professor of Social Work and Director of the Division of Public Welfare and Social Work*
A.B., 1924, A.M., 1930, Ph.D., 1936 (Pennsylvania); M.S.W., 1937 (Pennsylvania School of Social Work)

RUTH WHITE FINK, A.M., *Associate Professor of Physical Education*
B.S., 1926, A.M., 1936 (Ohio State)

FOSTER FITZ-SIMONS, A.B., *Assistant Professor of Dramatic Art*
A.B., 1934 (North Carolina)

RALPH GIBSON FLEMING, M.D., *Instructor in Medicine*
M.D., 1936 (Pennsylvania)

ABRAM CLINE FLORA, JR., M.A., *Part-time Instructor in Economics*
A.B., 1943, M.A., 1949 (South Carolina)

JOE SUMMERS FLOYD, JR., A.M., *Lecturer in Economics*
B.S., 1943 (Florida); A.M., 1944 (North Carolina)

GERALDINE ALMA FOSTER, A.M., *Assistant Dean of the College of Arts and Sciences*
B.S., 1931 (St. Lawrence); A.M., 1942 (North Carolina)

STANLEY E. FOWLER, M.A., *Instructor in Social Science*
A.B., 1947 (Baylor); M.A., 1948 (Peabody)

FRANCIS HILL FOX, A.B., M.D., *Instructor in Medicine*
A.B., 1931 (Duke); M.D., 1935 (Pennsylvania)

HERBERT JUNIUS FOX, A.B., M.D., *Instructor in Medicine*
A.B., 1929 (North Carolina); M.D., 1935 (Duke)

KEENER CHAPMAN FRAZER, A.M., *Professor of Political Science*
A.B., 1920 (Wofford College); A.M., 1921 (North Carolina)

EDWARD EVERETT FREED, M.A., *Assistant Professor of Motion Pictures in the Departments of Radio and Dramatic Art*
A.B., 1923 (Illinois); M.A., 1933 (Michigan)

LEON DAVID FREEDMAN, Ph.D., *Assistant Professor of Experimental Medicine*
A.B., 1941, M.A., 1947, Ph.D., 1949 (Johns Hopkins)

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*Absent on leave, 1949-1950.

ARDEN S. FREER, B.S., *Major, U. S. Air Force, Assistant Professor of Air Science and Tactics*
B.S., 1941 (Sewanee)

GEORGE EDWARD FRENCH, A.B., *Lieutenant, U. S. Naval Reserve, Lecturer in Naval Science*
A.B., 1931 (North Carolina)

DAVID GROVER FREY, Ph.D., *Associate Professor of Zoology*
A.B., 1936, A.M., 1938, Ph.D., 1940 (Wisconsin)

IDA HOWELL FRIDAY, A.B., M.P.H., *Instructor in Public Health Education*
A.B., 1941 (Meredith); M.P.H., 1947 (North Carolina)

*WERNER PAUL FRIEDERICH, Ph.D., *Professor of German and Comparative Literature*
A.M., 1929, Ph.D., 1932 (Harvard)

KARL HARTLEY FUSSLER, Ph.D., *Professor of Physics*
A.B., 1909 (Indiana); Ph.D., 1916 (Pennsylvania)

ARCHER FUTCH, JR., S.B., *Part-time Instructor in Physics*
S.B., 1949 (North Carolina)

LYTT IRVINE GARDNER, A.M., M.D., *Instructor in Biological Chemistry and Nutrition*
A.B., 1938, A.M., 1940 (North Carolina); M.D., 1943 (Harvard)

LOFTON LEROY GARNER, A.M., *Associate Professor of Mathematics*
A.B., 1925, A.M., 1927 (North Carolina)

ALLEN GARRETT, A.M., *Part-time Instructor in Music*
A.B., 1947, A.M., 1949 (North Carolina)

MITCHELL BENNETT GARRETT, Ph.D., LL.D., *Professor of Modern European History*
A.B., 1900, A.M., 1903 (Howard College); Ph.D., 1910 (Cornell); LL.D. (Howard College)

OSCAR DAVID GARVIN, M.D., M.P.H., *Visiting Assistant Professor of Public Health Administration*
M.D., 1932 (Medical College of the State of South Carolina); M.P.H., 1939 (Johns Hopkins)

JAMES R. GASKIN, A.B., *Part-time Instructor in English*
A.B., 1942 (University of Chattanooga)

LYNN GAULT, A.M., *Assistant Professor of Dramatic Art*
B.A., 1937 (Hiram College); A.M., 1939 (North Carolina)

RICHARD JEROME GEEHERN, A.M., *Part-time Instructor in English*
A.B., 1942 (Harvard); A.M., 1949 (North Carolina)

WILLIAM MONROE GEER, M.A., *Instructor in Social Science and Research Associate in the Institute for Research in Social Science*
A.B., 1935 (The Citadel); M.A., 1936 (Emory)

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*Absent on leave, spring and fall quarters, 1950.

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology*
A.B., 1911, A.M., 1912, Ph.D., 1918 (North Carolina)

EDWARD HIRAM GIBSON III, A.M., *Instructor in Social Science*
A.B., 1932, A.M., 1937 (North Carolina)

FRANK KENNETH GIBSON, JR., M.A., *Part-time Instructor in Political Science*
A.B., 1947, M.A., 1948 (West Virginia)

J. SULLIVAN GIBSON, Ph.D., *Associate Professor of Geography*
B.A., 1926 (Abilene Christian College); Ph.M., 1929 (Wisconsin); Ph.D., 1934 (Clark)

WILLIAM CHARLES GIBSON, B.S.C.E., *Instructor in Field Training*
B.S.C.E., 1936 (New York University)

HUGO GIDUZ, A.B., *Professor of French*
A.B., 1905 (Harvard)

FEDERICO GUILLERMO GIL, J.D., D.Pol.Sci., D.Dip.Law, *Associate Professor of Political Science*
J.D., 1938, D.Pol.Sci., 1940, D.Dip.Law, 1941 (Habana)

ALICE R. GILES, A.M., *Part-time Instructor in Botany*
A.B., 1936 (Richmond); A.M., 1947 (North Carolina)

*JAMES PERCIVAL GILL, A.B., *Assistant Football Coach and Instructor in Physical Education*
A.B., 1934 (Missouri)

JOHN PHILIP GILLIN, Ph.D., *Professor of Anthropology and Research Professor in the Institute for Research in Social Science*
A.B., 1927, A.M., 1930 (Wisconsin); A.M., 1931, Ph.D., 1934 (Harvard)

RUTH GILPIN, M.A., M.S.W., *Associate Professor of Social Work*
A.B., 1930 (Wilson College); M.A., 1931 (Pittsburgh); M.S.W., 1940 (University of Pennsylvania School of Social Work)

JAMES EDWARD GINTHER, M.A., *Part-time Instructor in English*
A.B., 1939 (College of Wooster); M.A., 1946 (Duke)

JAMES LOGAN GODFREY, Ph.D., *Professor of English History*
A.B., 1931 (Roanoke College); A.M., 1933 (North Carolina); Ph.D., 1942 (Chicago)

KATHLEEN GOLDIE-SMITH, M.Sc., *Part-time Instructor in Botany*
B.Sc., 1944, M.Sc., 1948 (Royal Holloway College of the University of London)

CLOYD S. GOODRUM, JR., B.Ae.E., *Part-time Instructor in Mathematics*
B.Ae.E., 1946 (Rensselaer Polytechnic Institute)

JOHN BORDEN GRAHAM, B.S., M.D., *Assistant Professor of Pathology*
B.S., 1938 (Davidson); M.D., 1942 (Cornell)

WILLIAM ALEXANDER GRAHAM, A.B., M.D., *Lecturer in Obstetrics*
A.B., 1928 (North Carolina); M.D., 1932 (Pennsylvania)

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*Resigned, February 1, 1950.

MARVIN LEROY GRANSTROM, M.S.S.E., *Assistant Professor of Sanitary Engineering*

B.S., 1942 (Morningside College, Iowa); B.S. Civ. Eng'g., 1943 (Iowa State); M.S.S.E., 1947 (Harvard)

MARGARET SPENCER GRAVATT, B.A., M.S.P.H., *Research Associate in Experimental Medicine*

B.A., 1945 (Woman's College, U.N.C.); M.S.P.H., 1947 (North Carolina)

FLETCHER MELVIN GREEN, Ph.D., *Kenan Professor of History*

Ph.B., 1920 (Emory); A.M., 1922, Ph.D., 1927 (North Carolina)

PHILIP PALMER GREEN, JR., A.B., LL.B., *Assistant Director of the Institute of Government*

A.B., 1943 (Princeton); LL.B., 1949 (Harvard)

BERNARD GEORGE GREENBERG, Ph.D., *Associate Professor of Biostatistics in the Institute of Statistics and the School of Public Health*

B.S., 1939 (City College of New York); Ph.D., 1949 (North Carolina State)

MAURICE HERZBERGER GREENHILL, A.B., M.D., *Visiting Associate Professor of Public Health Psychiatry; Associate Professor of Neuropsychiatry, Duke University School of Medicine*

A.B., 1931 (Rochester); M.D., 1936 (Chicago)

THOMAS YOUNG GREET, A.B., *Part-time Instructor in English*

A.B., 1947 (Duke)

BRYAN B. GRESHAM, A.B., *Part-time Instructor in Mathematics*

A.B., 1949 (North Carolina)

VICTOR AUGUST GREULACH, Ph.D., *Associate Professor of Botany*

A.B., 1929 (DePauw); M.S., 1933, Ph.D., 1940 (Ohio State)

VIRGINIA CAFFEE GRIGG, A.B., S.B. in L.S., *Instructor in Library Science and Librarian of the School of Library Science*

A.B., 1945 (Randolph-Macon Woman's College); S.B. in L.S., 1949 (North Carolina)

JUNE U. GUNTER, A.B., M.D., *Instructor in Pathology and Director of Laboratories at Watts Hospital*

A.B., 1931 (North Carolina); M.D., 1936 (Jefferson Medical College)

DAVID VANCE GUTHRIE, JR., *Instructor in Political Science*

B.A., 1946, M.A., 1947 (Washington and Lee)

PAUL NEWMAN GUTHRIE, Ph.D., *Professor of Economics*

A.B., 1926 (Tennessee); B.D., 1932 (Union Theological Seminary); M.A., 1932, Ph.D., 1946 (Columbia)

FRANZ GUTMANN, D.Ec., *Lecturer in Economics, Emeritus; Professor of Economics, Emeritus, University of Goettingen*

D.Ec., 1904 (Strasbourg)

JOHN MINOR GWYNN, Ph.D., *Professor of Education*

A.B., 1918, A.M., 1927 (North Carolina); Ph.D., 1935 (Yale)

CLIFTON L. HALL, M.A., *Visiting Lecturer in Education*

B.A., 1921 (Bishops' University, Quebec); M.A., 1932 (McGill University); M.A., 1941 (Columbia)

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph.D., Litt.D., *Kenan Professor of History and Political Science, Emeritus, and Consultant of the Southern Historical Collection*
M.A., 1900 (University of the South); Ph.D., 1906 (Columbia); Litt.D. (University of the South, Washington and Lee)

MARGARET ROBERTA MCKENZIE HAMILTON, A.M., *Instructor in English*
A.B., 1931 (Flora MacDonald); A.M., 1949 (North Carolina)

GLENN OLIVER HAMRICK, M.B.A., *Part-time Lecturer in Economics*
B.B.A., 1942 (Southern Methodist); M.B.A., 1949 (Texas Christian)

FRANK WILLIAM HANFT, A.B., LL.M., S.J.D., *Professor of Law*
LL.B., 1924, A.B., 1929, LL.M., 1929 (Minnesota); S.J.D., 1931 (Harvard)

*OBA THOMAS HANNA, JR., B.S., *Part-time Instructor in Accounting*
B.S., 1949 (North Carolina)

JACQUES HARDRÉ, Ph.D., *Assistant Professor of French*
Bacc.Sciences-Langues, 1936 (Paris); A.B., 1937 (Guilford); A.M., 1941, Ph.D., 1948 (North Carolina)

JAMES PENROSE HARLAND, Ph.D., *Professor of Archaeology*
A.B., 1913, A.M., 1915, Ph.D., 1920 (Princeton)

GEORGE M. HARPER, M.A., *Part-time Instructor in English*
A.B., 1940 (Culver-Stockton College); M.A., 1947 (Florida)

HUBERT HILL HARPER, JR., A.B., *Part-time Instructor in Latin*
A.B., 1948 (Birmingham-Southern)

FREDERICK HOLLADAY HARRIS, A.M., *Part-time Instructor in Political Science*
A.B., 1934 (Randolph-Macon); A.M., 1943 (North Carolina)

MAURICE ALTON HARTMAN, S.M., *Lecturer in Accounting*
B.S., 1937 (High Point College); S.M., 1947 (North Carolina)

EARL HORACE HARTSELL, Ph.D., *Associate Professor of English*
A.B., 1924, A.M., 1935, Ph.D., 1942 (North Carolina)

WALTER H. HARTUNG, Ph.D., *Professor of Pharmaceutical Chemistry*
A.B., 1918 (Minnesota); Ph.D., 1926 (Wisconsin)

RUTH WARWICK HAY, M.S., *Professor of Public Health Nursing*
B.A., 1916 (Ohio Wesleyan); M.S., 1925 (Western Reserve)

GLEN HAYDON, Ph.D., *Professor of Music*
A.B., 1918, M.A., 1921 (California); Ph.D., 1932 (Vienna)

DONALD BALES HAYMAN, A.M., *Assistant Director of the Institute of Government*
A.B., 1940 (Kansas); A.M., 1947 (North Carolina)

EMILIE V. HAYNSWORTH, M.A., *Part-time Instructor in Mathematics*
A.B., 1937 (Coker); M.A., 1939 (Columbia)

BUNN HEARN, *Head Baseball Coach*

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*Resigned, January 1, 1950.

MILTON SIDNEY HEATH, Ph.D., *Professor of Economics*
A.B., 1917 (Kansas); A.M., 1924, Ph.D., 1938 (Harvard)

LANDON CARROLL HECK, A.B. in Math., A.B. in Physics, *Part-time Instructor in Physics*
A.B. in Math., 1942, A.B. in Physics, 1948 (Catawba)

EDWARD MCGOWAN HEDGPETH, A.B., M.D., F.A.C.P., *University Physician and Instructor in Medicine*
A.B., 1927 (North Carolina); M.D., 1931 (Pennsylvania); F.A.C.P., 1944

*CLARENCE HEER, Ph.D., *Kenan Professor of Economics*
A.B., 1914 (Rochester); Ph.D., 1926 (Columbia)

WALTER RITTER HEILMAN, JR., M.A., *Instructor in Spanish*
B.A., 1939 (Davidson); M.A., 1949 (Tennessee)

ARCHIBALD HENDERSON, Ph.D., D.C.L., LL.D., Litt.D., *Professor of Mathematics, Emeritus*
A.B., 1898, A.M., 1899, Ph.D., 1902 (North Carolina); Ph.D., 1915 (Chicago); D.C.L. (University of the South); LL.D. (Tulane, William and Mary); Litt.D., (Oglethorpe, Catawba)

JAMES RICHARD HENDRICKS, B.S., S.M., *Part-time Instructor in Parasitology*
B.S., 1940 (Guilford College); S.M., 1948 (North Carolina)

CATHERINE HENLEY, Ph.D., *Research Associate in Zoology*
A.B., 1943 (North Carolina); M.A., 1947 (Johns Hopkins); Ph.D., 1949 (North Carolina)

HARRIET LAURA HERRING, A.M., *Associate Professor of Sociology and Research Associate in the Institute for Research in Social Science*
A.B., 1913 (Meredith); A.M., 1918 (Radcliffe)

IVAN R. HERSHNER, JR., Ph.D., *Assistant Professor of Mathematics*
B.S., 1938, M.A., 1940 (Nebraska); A.M., 1941, Ph.D., 1947 (Harvard)

EDWIN PEELLE HIATT, Ph.D., *Associate Professor of Physiology*
A.B., 1933 (Wilmington College); M.A., 1934 (Haverford); Ph.D., 1940 (Maryland)

JAMES EDWARD HIBDON, M.A., *Part-time Instructor in Economics*
B.A., 1948, M.A., 1949 (Oklahoma)

THOMAS FELIX HICKERSON, A.M., S.B., *Kenan Professor of Applied Mathematics*
Ph.B., 1904, A.M., 1907 (North Carolina); S.B. in Civ. Eng'g., 1909 (Massachusetts Institute of Technology)

PHILIP HENRY HIGHFILL, JR., A.M., *Part-time Instructor in English*
A.B., 1942 (Wake Forest); A.M., 1948 (North Carolina)

MICHAEL ARENDELL HILL, JR., A.M., *Professor of Mathematics and Associate Dean of the General College*
A.B., 1920, A.M., 1922 (North Carolina)

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*Absent on leave, winter quarter, 1950.

REUBEN HILL, Ph.D., *Professor of Sociology and Research Professor in the Institute for Research in Social Science*
B.S., 1935 (Utah State); Ph.M., 1936, Ph.D., 1938 (Wisconsin)

JOSEPH HILTON, A.M., *Instructor in Physical Education*
A.B., 1940, A.M., 1948 (North Carolina)

ANTHONY KEITH HINDS, M.A., *Part-time Instructor in Mathematics*
A.B., 1931 (Birmingham-Southern); M.A., 1932 (Alabama)

ALLAN WILSON HOBBS, Ph.D., *Professor of Applied Mathematics*
A.B., 1907 (Guilford College); A.B., 1908 (Haverford); Ph.D., 1917 (Johns Hopkins)

RICHARD JUNIUS MENDENHALL HOBBS, A.B., LL.B., *Professor of Business Law*
A.B., 1909 (Guilford College); A.B., 1911 (Haverford); LL.B., 1914 (Columbia)

SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Professor of Rural Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1916, A.M., 1917 (North Carolina); Ph.D., 1929 (Wisconsin)

JAMES ROLAND HODGES, M.A., *Part-time Instructor in English*
A.B., 1941, M.A., 1942 (Vanderbilt)

JOHN LAWRENCE HODGES, A.M., *Instructor in German*
A.B., 1934, A.M., 1941 (North Carolina)

WASSILY HOEFFDING, Ph.D., *Assistant Professor of Mathematical Statistics*
Ph.D., 1940 (Berlin)

*FRANCES BURNS HOGAN, M.A., *Assistant Professor of Physical Education*
B.S., 1943 (Winthrop); M.A., 1945 (Iowa)

C. HUGH HOLMAN, Ph.D., *Assistant Professor of English*
B.S., 1936, B.A., 1938 (Presbyterian College); Ph.D., 1949 (North Carolina)

†URBAN TIGNER HOLMES, JR., Ph.D., Litt.D., *Kenan Professor of Romance Philology*
A.B., 1920 (Pennsylvania); A.M., 1921, Ph.D., 1923 (Harvard); Litt.D. (Washington and Lee)

SAMUEL M. HOLTON, Ph.D., *Assistant Professor of Education*
A.B., 1942 (Duke); B.S., 1943 (New York); M.A. 1947 (Yale); M.Educ., 1947 (Duke); Ph.D., 1948 (Yale)

CHARLES WRIGHT HOOKER, Ph.D., *Professor of Anatomy*
A.B., 1930, A.M., 1932, Ph.D., 1933 (Duke)

GEORGE FREDERICK HORNER, Ph.D., *Associate Professor of English*
A.B., 1921, M.A., 1924 (Pennsylvania State College); Ph.D., 1938 (North Carolina)

HAROLD HOTELLING, Ph.D., *Professor of Mathematical Statistics and Associate Director, Institute of Statistics*
A.B., 1919, M.Sc., 1921 (University of Washington); Ph.D., 1924 (Princeton)

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*Resigned, June 30, 1950.
†Absent on leave, fall quarter, 1950.

HENRY CHARLES HOUSE, JR., A.M., *Associate Professor of Physical Education*
A.B., 1931, A.M., 1943 (North Carolina)

WILLIAM ADDISON HOVER, A.M., *Instructor in French*
B.A., 1947 (Cincinnati); A.M., 1949 (North Carolina)

ALMONTE CHARLES HOWELL, Ph.D., *Professor of English and Secretary of the Faculty*
A.B., 1917 (Denison); M.A., 1920 (Columbia); Ph.D., 1924 (North Carolina); Prof. Hon., 1948 (San Carlos, Guatemala)

VINTON ASBURY HOYLE, Ph.D., *Professor of Mathematics*
A.B., 1924, A.M., 1925 (North Carolina); Ph.D., 1930 (Princeton)

*JOHN WARFIELD HUDDLE, Ph.D., *Professor of Geology*
B.S., 1929 (Northwestern); Ph.D., 1934 (Indiana)

ARTHUR PALMER HUDSON, Ph.D., *Professor of English*
B.S., 1913, M.A., 1920 (Mississippi); A.M., 1925 (Chicago); Ph.D., 1930 (North Carolina)

KERMIT HOUSTON HUNTER, A.M., *Part-time Instructor in English*
A.B., 1931 (Ohio State); A.M., 1949 (North Carolina)

RHODA HUNTER, A.M., *Instructor in Radio*
B.S., 1943 (State Teachers College, Indiana, Pa.); A.M., 1949 (North Carolina)

HOWARD RUSSELL HUSE, Ph.D., *Professor of French and Italian*
Ph.B., 1913, Ph.D., 1930 (Chicago)

JOSEPH CANDLER HUTCHINSON, M.A., *Instructor in French*
A.B., 1940, M.A., 1941 (Emory)

ROY LEE INGRAM, Ph.D., *Assistant Professor of Geology*
S.B. in Geol., 1941 (North Carolina); M.S. in Geol. and Phys., 1943 (Oklahoma); Ph.D., 1948 (Wisconsin)

†MARION LEE JACOBS, Ph.D., *Professor of Pharmaceutical Chemistry and Dean of the School of Pharmacy*
Ph.C., 1921 (North Carolina); B.S. Pharm., 1924, M.S., 1926 (Nebraska); Ph.D., 1937 (Maryland)

HANS H. JAFFE, M.S., *Instructor in Experimental Medicine*
B.S., 1941 (Iowa); M.S., 1942 (Purdue)

RICHARD ELMER JAMERSON, Ed.D., *Associate Professor of Physical Education*
B.S. in Phys. Educa., 1932 (The Rice Institute); M.A. in Phys. Educa., 1934 (Teachers College, Columbia); Ed.D., 1949 (Columbia)

‡ROBERT M. JAMES, M.S., *Assistant Professor of Accounting*
B.S., 1943, M.S., 1948 (Illinois)

ANNIBEL JENKINS, M.A., *Part-time Instructor in English*
A.B., 1938 (Blue Mountain College); M.A., 1943 (Baylor)

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*Resigned, September 1, 1949.
†Deceased, March 19, 1950.
‡Beginning September 1, 1950.

*WILLIAM SUMNER JENKINS, Ph.D., LL.B., *Professor of Political Science*
A.B., 1924, A.M., 1925, Ph.D., 1927, LL.B., 1931 (North Carolina); M.A. in Military Government, 1943 (Columbia)

ARTHUR VALDEMAR JENSEN, Ph.D., *Associate Professor of Anatomy*
A.B., 1939 (Trinity College, Hartford, Conn.); M.A., 1940, Ph.D., 1943 (Cornell)

RICHARD JENTE, Ph.D., *Professor of the Germanic Languages and Literatures*
A.B., 1910, A.M., 1911 (Yale); Ph.D., 1917 (Heidelberg)

KATHARINE JOCHER, Ph.D., *Professor of Sociology and Assistant Director of the Institute for Research in Social Science*
A.B., 1922 (Goucher College); A.M., 1923 (Pennsylvania); Ph.D., 1929 (North Carolina)

CECIL JOHNSON, Ph.D., *Professor of History and Associate Dean of the General College*
A.B., 1922 (Mississippi College); M.A., 1924 (Virginia); Ph.D., 1932 (Yale)

EVELYN ELIZABETH JOHNSON, B.S., *Assistant Professor of Public Health Nursing in the Department of Field Training*
C.P.H.N., 1931, B.S., 1936, C.P.S.W., 1939 (Western Reserve)

GUY BENTON JOHNSON, Ph.D., *Professor of Sociology and Anthropology and Research Professor in the Institute for Research in Social Science*
A.B., 1921 (Baylor); A.M., 1922 (Chicago); Ph.D., 1927 (North Carolina)

JAMES HENRY JOHNSON, A.B., *Instructor in Spanish*
A.B., 1948 (North Carolina)

CLAIBORNE STRIBLING JONES, Ph.D., *Associate Professor of Zoology*
A.B., 1935 (Hampden-Sydney College); M.A., 1940, Ph.D., 1944 (Virginia)

EDWARD EUGENE JONES, JR., A.B., *Part-time Instructor in Zoology*
A.B., 1947 (South Carolina)

EMILY WOODSON JONES, B.S., *Part-time Instructor in Physics*
B.S., 1947 (Alabama)

†FLOYD BURTON JONES, Ph.D., *Professor of Mathematics*
B.A., 1932, Ph.D., 1935 (Texas)

ARTHUR MELVILLE JORDAN, Ph.D., *Professor of Educational Psychology*
A.B., 1907 (Randolph-Macon); A.M., 1909 (Trinity College); Ph.D., 1919 (Columbia)

ANTHONY FAUST JUDY, B.A., *Instructor in Spanish*
B.A., 1948 (Roanoke)

KAI JURGENSEN, A.M., *Associate Professor of Dramatic Art*
A.B., 1937 (Montana); A.M., 1943 (North Carolina)

GEORGE KACHERGIS, M.F.A., *Assistant Professor of Art*
B.F.A., 1946, M.F.A., 1948 (The Art Institute of Chicago)

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*Absent on special leave, fall quarter, 1949.
†Beginning September 1, 1950.

MARGARET ELLEN KALP, B.A., M.A. in L.S., *Assistant Professor of Library Science*
B.A., 1936 (New Jersey College for Women); M.A. in L.S., 1942 (Michigan)

NORMAN KAPLAN, B.S., M.A., *Part-time Lecturer in Psychology*
B.S., 1936 (Georgia); M.A., 1938 (Columbia); Professional Diploma, 1941 (Teachers College, Columbia)

ROBERT EARL KASKE, A.M., *Part-time Instructor in English*
B.A., 1942 (Xavier University); A.M., 1947 (North Carolina)

LOUIS OSGOOD KATTSOFF, Ph.D., *Professor of Philosophy*
A.B., 1929, A.M., 1930, Ph.D., 1934 (Pennsylvania)

CORNELIUS TIMPSON KAYLOR, Ph.D., *Associate Professor of Anatomy*
A.B., 1931 (Wesleyan); M.S., 1933 (Rutgers); Ph.D., 1936 (Princeton)

MARY FRANCES KELLAM, B.S., A.M., *Instructor in Physical Education*
B.S., 1944 (Woman's College, U.N.C.); A.M., 1948 (North Carolina)

WILLIAM PORTER KELLAM, A.M., A.B. in L.S., *Associate Professor, Assistant Librarian*
A.B., 1926, A.M., 1929 (Duke); A.B. in L.S., 1931 (Emory)

LUCILE KELLING, A.B., B.L.S., *Professor of Library Science*
A.B., 1917 (Whitman College); B.L.S., 1921 (New York State Library School)

JOHN FAWCETT KENFIELD, *Instructor in Physical Education*

MAURICE ARTHUR KIDDER, B.A., S.T.M., *Lecturer in Religion on the James A. Gray Foundation*
B.A., 1935 (New Hampshire); S.T.B., 1938 (Boston); S.T.M., 1946 (Yale)

FRANK EFIRD KINARD, A.B., *Part-time Instructor in Physics*
A.B., 1947 (Newberry)

ARNOLD KIMSEY KING, A.M., *Professor of Education and Associate Dean of the Graduate School*
A.B., 1925 (North Carolina); A.M., 1927 (Chicago)

*HARRY LEE KING, JR., B.A., *Instructor in Spanish*
B.A., 1936 (Richmond)

JAMES EDWARD KING, JR., Ph.D., *Assistant Professor of History*
B.A., 1938 (Richmond); Ph.D., 1947 (Johns Hopkins)

CHARLES ATKINSON KIRKPATRICK, D.C.S., *Associate Professor of Marketing*
A.B., 1928, A.M., 1929 (Duke); D.C.S., 1933 (New York University)

FRANK WYSOR KLINGBERG, Ph.D., *Assistant Professor of History*
B.A., 1941, Ph.D., 1948 (University of California at Los Angeles)

EDGAR WALLACE KNIGHT, Ph.D., *Kenan Professor of Education*
A.B., 1909, A.M., 1911 (Trinity College); Ph.D., 1913 (Columbia)

SAMUEL BRADLEY KNIGHT, Ph.D., *Professor of Chemistry*
B.S., 1934 (Clemson College); S.M., 1937, Ph.D., 1938 (North Carolina)

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*Absent on leave, fall and winter quarters, 1949-1950.

WILLIAM J. KOCH, A.B., *Part-time Instructor in Botany*
A.B., 1947 (North Carolina)

FRANK JOSEPH KOTTKE, Ph.D., *Associate Professor of Economics*
A.B., 1937, M.A., 1938 (Northwestern); Ph.D., 1944 (Columbia)

HERBERT LEOPOLD KUEFNER, Matura, *Instructor in German*
Matura, 1947 (Rupprechtoberschule Munich)

*GRANVIL CHARLES KYKER, Ph.D., *Associate Professor of Biological Chemistry and Nutrition*
B.S., 1932 (Carson-Newman College); Ph.D., 1938 (North Carolina)

HASELL THOMAS LABORDE, M.A., *Part-time Instructor in Mathematics*
A.B., 1942, M.A., 1948 (South Carolina)

GEORGE SHERMAN LANE, Ph.D., *Kenan Professor of Germanic and Comparative Linguistics*
B.A., 1926, M.A., 1927 (Iowa); Ph.D., 1930 (Chicago)

JOHN EDGAR LARSH, JR., Sc.D., *Professor of Parasitology*
A.B., 1939, M.S., 1940 (Illinois); Sc.D., 1943 (Johns Hopkins)

JOHN WAYNE LASLEY, JR., Ph.D., *Professor of Pure Mathematics*
A.B., 1910, A.M., 1911 (North Carolina); Ph.D., 1920 (Chicago)

THOMAS J. LASSITER, A.B., *Lecturer in Journalism*
A.B., 1932 (Duke)

JEAN LATHIM, A.B., *Part-time Instructor in English*
A.B., 1937 (Park)

FRANKLIN D. LAURENS, A.M., *Instructor in Social Science*
A.B., 1942, A.M., 1949 (North Carolina)

ROBERT BAKER LAWSON, M.D., *Professor of Physical Education, Emeritus*
Student, 1897-1900 (North Carolina); M.D., 1902 (Maryland)

JAMES WALTER LAYMAN, Ph.D., *Professor of Psychology*
A.B., 1932, M.A., 1933 (Western Reserve); Ph.D., 1936 (Iowa)

†MARTIN EDWIN LEAN, Ph.D., *Assistant Professor of Philosophy*
A.B., 1940 (Central College, Chicago); M.A., 1942 (University of Nebraska); Ph.D., 1948 (Columbia)

JOSEPH MERRITT LEAR, M.A., *Professor of Insurance, Emeritus*
A.B., 1900, A.M., 1902 (Randolph-Macon); M.A., 1915 (Columbia)

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish*
A.B., 1908 (Bowdoin); A.M., 1913, Ph.D., 1917 (Harvard); Litt.D. (Bowdoin, Davidson)

MARY JEAN LEE, A.M., *Instructor in German*
B.A., 1939 (Western Ontario); A.M., 1947 (North Carolina)

HUGH TALMAGE LEFLER, Ph.D., *Professor of History*
A.B., 1921, A.M., 1922 (Trinity College); Ph.D., 1931 (Pennsylvania)

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*Resigned, July 1, 1950.
†Absent on leave, 1949-1950.

HARVEY EUGENE LEHMAN, Ph.D., *Assistant Professor of Zoology*
A.B., 1941 (Maryville College); A.M., 1944 (North Carolina); Ph.D., 1948 (Stanford)

*GEORGE EIDT LENT, Ph.D., *Associate Professor of Economics*
B.S., 1934, M.B.A., 1935 (Rensselaer Polytechnic Institute); Ph.D., 1947 (Columbia)

HENRY WILKINS LEWIS, A.B., LL.B., *Assistant Director of the Institute of Government*
A.B., 1937 (North Carolina); LL.B., 1940 (Harvard)

BETTY LIDE, B.S., *Part-time Instructor in Mathematics*
B.S., 1946 (Wake Forest College)

ROBERT BOYD LINDSAY, M.D., *Associate Physician*
B.S., 1936 (Davidson); M.D., 1940 (Jefferson)

JOE BURTON LINKER, Ph.D., *Professor of Mathematics*
A.B., 1918, A.M., 1920 (North Carolina); Ph.D., 1924 (Johns Hopkins)

ROBERT WHITE LINKER, Ph.D., *Associate Professor of French*
A.B., 1925, A.M., 1928, Ph.D., 1933 (North Carolina)

†CHESTER CROWELL LITTLE, A.B., *Assistant Football Coach and Instructor in Physical Education*
A.B., 1938 (North Carolina)

HERBERT LIVINGSTON, A.M., *Part-time Instructor in Music*
Mus.B., 1937 (Syracuse); A.B., 1942, A.M., 1947 (North Carolina)

CLEMENT SEARL LOGSDON, Ph.D., *Professor of Marketing*
B.S., 1924 (Georgetown); M.A., 1928, Ph.D., 1940 (Ohio State)

ARTHUR HILL LONDON, S.B., M.D., *Lecturer in Pediatrics*
S.B., 1925 (North Carolina); M.D., 1927 (Pennsylvania)

EUGENE R. LONG, M.A., *Assistant Professor of Psychology*
A.B., 1946, M.A., 1947 (Virginia)

ROBERT L. J. LONG, B.S., *Lieutenant, U. S. Navy, Assistant Professor of Naval Science*
B.S., 1943 (U. S. Naval Academy)

‡ALBERT GILLIAM LOWE, JR., B.S., S.B. in Phar., *Part-time Instructor in Pharmacy*
B.S., 1945, S.B. in Phar., 1949 (Alabama Polytechnic Institute)

OLGA GERNOVA LYERLY, A.B., *Part-time Instructor in Psychology*
A.B., 1948 (Hunter College)

SAMUEL B. LYERLY, A.M., *Part-time Lecturer in Psychology*
A.B., 1940, A.M., 1947 (North Carolina)

ERNESTINE BARBER LYNCH, S.B. in Phar., *Instructor in Pharmacy*
S.B. in Phar., 1938 (North Carolina)

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*Absent on leave, 1949-1950.
†Resigned, January 1, 1950.
‡Fall quarter, 1949.

CLIFFORD PIERSON LYONS, Ph.D., *Professor of English*
A.B., 1925 (Cornell College); Ph.D., 1932 (Johns Hopkins)

JOHN CORIDEN LYONS, Ph.D., *Professor of Romance Languages*
B.S., 1920, M.A., 1921 (William and Mary); Ph.D., 1927 (North Carolina)

FREDERICK BAYS MCCALL, A.B., LL.B., *Professor of Law*
A.B., 1915 (North Carolina); LL.B., 1928 (Yale)

*GERALD RALEIGH MACCARTHY, Ph.D., *Professor of Geology and Geophysics*
A.B., 1921 (Cornell); A.M., 1924, Ph.D., 1926 (North Carolina)

JOSEPH PICKETT MCCRACKEN, M.D., *Instructor in Medicine*
M.D., 1937 (Duke)

DOROTHY DANIEL MCCULLOUGH, M.A., *Instructor in English*
A.B., 1942 (Georgia); M.A., 1943 (Wellesley)

HAROLD GRIER MCCURDY, Ph.D., *Associate Professor of Psychology*
A.B., 1930, Ph.D., 1938 (Duke)

DOROTHY MCCUSKEY, Ph.D., *Associate Professor of Education*
A.B., 1929 (College of Wooster); M.A., 1930 (Radcliffe); Ph.D., 1936 (Yale)

WILLIAM BENSON MCCUTCHEON, M.D., *Lecturer in Surgery*
M.D., 1921 (Medical College of Virginia)

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Professor of Epidemiology and Dean of the School of Public Health*
A.B., 1924 (Butler University); M.D., 1928 (Harvard Medical School); M.P.H., 1935 (Harvard School of Public Health)

DAN MAYS MCGILL, Ph.D., *Julian Price Associate Professor of Life Insurance*
A.B., 1940 (Maryville); A.M., 1941 (Vanderbilt); Ph.D., 1947 (Pennsylvania)

CLARENCE HENRY MCGREGOR, Ph.D., *Professor of Marketing*
B.S., 1925 (Kansas State Teachers College of Emporia); M.B.A., 1930 (Kansas); Ph.D., 1937 (Northwestern)

ERNEST WILLIAM MACHEN, JR., A.B., J.D., *Assistant Director of the Institute of Government*
A.B., 1943 (John B. Stetson); J.D., 1949 (North Carolina)

THOMAS COWAN MCILHENNY, S.B., *Part-time Instructor in Geology*
S.B., 1949 (North Carolina)

WILLIAM LEE MCILWINEN, A.B., *Part-time Instructor in English*
A.B., 1937 (Davidson)

ROBERT LAMBERT MCKEE, Ph.D., *Associate Professor of Chemistry*
B.S., 1938 (Rice Institute); M.A., 1940, Ph.D., 1943 (Texas)

WILLIAM JOHN MCKEE, Ph.D., *Professor of Education in Extension Teaching*
C.E., 1909 (Cornell); M.A., 1919, Ph.D., 1930 (Columbia)

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*Absent on leave for one year, beginning spring quarter, 1949.

ERNEST LLOYD MACKIE, Ph.D., *Professor of Mathematics and Dean of Student Awards and Distinctions*
A.B., 1917 (North Carolina); A.M., 1920 (Harvard); Ph.D., 1927 (Chicago)

LOREN CAREY MACKINNEY, Ph.D., *Professor of Medieval History*
A.B., 1913 (Lawrence College); A.M., 1916 (Wisconsin); Ph.D., 1925 (Chicago)

CATHERINE FRANCES MACKINNON, A.B., M.S., *Associate Professor of Public Health Nutrition*
A.B., 1924 (Montana State University); M.S., 1936 (University of Michigan Medical School)

WILLIAM ALBERT MCKNIGHT, A.M., *Instructor in Spanish*
B.S., 1932 (Davidson); A.M., 1937 (North Carolina)

MURIEL MCLAUCHLIN, A.B., M.S.W., *Associate Professor of Social Work*
A.B., 1923 (California); M.S.W., 1937 (University of Pennsylvania School of Social Work)

BERNARD W. MCLEAN, B.S., *Major, U.S. Marine Corps, Assistant Professor of Naval Science*
B.S., 1940 (Tennessee)

JOHN BLOUNT MACLEOD, A.M., LL.B., *Instructor in Social Science*
LL.B., 1922 (Wake Forest College); A.B., 1939, A.M., 1947 (North Carolina)

SAMUEL ALEXANDER MCLEOD, A.B., *Part-time Instructor in Mathematics*
A.B., 1948 (North Carolina)

JOHN ALEXANDER MCMAHON, A.B., LL.B., *Assistant Director of the Institute of Government*
A.B., 1942 (Duke); LL.B., 1948 (Harvard)

DOUGALD MACMILLAN, Ph.D., *Professor of English*
A.B., 1918, A.M., 1920, Ph.D., 1925 (North Carolina)

WILLIAM DEBERNIERE MACNIDER, M.D., Sc.D., LL.D., *Kenan Research Professor of Pharmacology*
M.D., 1903 (North Carolina); Sc.D. (Medical College of Virginia); LL.D. (Davidson)

NATHANIEL MACON, A.M., *Part-time Instructor in Mathematics*
A.B., 1946, A.M., 1947 (North Carolina)

DANIEL ALLAN MACPHERSON, Ph.D., *Professor of Bacteriology*
Ph.B., 1919, Sc.M., 1920 (Brown); Ph.D., 1929 (Chicago)

JAMES ROBERTSON MCQUISTON, A.B., *Part-time Instructor in English*
A.B., 1947 (Southwestern, Memphis)

HAROLD JOSEPH MAGNUSON, A.B., M.D., M.P.H., *Research Professor of Experimental Medicine*
A.B., 1934, M.D., 1938 (Southern California); M.P.H., 1942 (Johns Hopkins)

HAROLD MANDEL, B.S., *Part-time Instructor in Geology and Geography*
B.S., 1948 (City College of New York)

William Robert Mann, Ph.D., *Instructor in Mathematics*
A.B., 1941 (Rochester); Ph.D., 1949 (California)

Isaac Hall Manning, Jr., A.B., M.D., *Instructor in Medicine*
A.B., 1931 (North Carolina); M.D., 1935 (Harvard)

William J. Manning, B.S., *Commander, U. S. Navy, Associate Professor of Naval Science*
B.S., 1939 (U. S. Naval Academy)

William Frederick Markgraf, S.B., *Part-time Instructor in Geology*
S.B., 1949 (North Carolina)

Edwin Carlyle Markham, Ph.D., *Professor of Chemistry*
A.B., 1923 (Trinity College); Ph.D., 1927 (Virginia)

Hubert Ray Marshall, A.B., *Part-time Instructor in Political Science*
A.B., 1947 (Antioch College)

Roy K. Marshall, Ph.D., *Professor of Astronomy and Director of the Morehead Planetarium*
B.A., 1929 (Ohio Wesleyan); M.A., 1930, Ph.D., 1932 (Michigan)

Frederick Carlyle Martin, A.M., *Instructor in Spanish*
A.B., 1947, A.M., 1948 (Emory)

Gruver Howard Martin, A.B., *Part-time Instructor in Physics*
A.B., 1949 (Western Maryland)

Albert Victor Hugo Masket, Ph.D., *Associate Professor of Physics*
B.S., 1935 (New York); M.S., 1936, Ph.D., 1938 (Virginia)

James Irving Mason, Jr., A.B., *Part-time Instructor in Political Science*
A.B., 1947 (North Carolina)

Wilton Mason, Ph.D., *Assistant Professor of Music*
A.B., 1937, A.M., 1947, Ph.D., 1949 (North Carolina)

Elta Mae Mast, B.Ed., M.S.P.H., *Assistant Professor of Public Health Education*
B.Ed., 1942 (Illinois State Normal University); M.S.P.H., 1945 (North Carolina)

Norman W. Mattis, M.A., *Associate Professor of English*
A.B., 1926 (Pittsburgh); M.A., 1927 (Cornell)

Gene W. Medlin, B.S., *Part-time Instructor in Mathematics*
B.S., 1948 (Wake Forest)

Harold Diedrich Meyer, A.M., LL.D., R.S.D., *Professor of Sociology*
A.B., 1912, A.M., 1916 (Georgia); LL.D. (Florida Southern College); R.S.D. (Salem College, Salem, W. Va.)

Edwin A. Miles, A.M., *Instructor in Social Science*
A.B., 1948 (Birmingham-Southern); A.M., 1949 (North Carolina)

Augustus Taylor Miller, Jr., Ph.D., *Associate Professor of Physiology and Director, Laboratory of Applied Physiology*
B.S., 1931, M.S., 1933 (Emory); Ph.D., 1939 (Michigan)

*WILLIAM JOHN MILLER, Ph.D., *Visiting Professor of Geology*
B.S., 1900, Sc.D., 1926 (College of the Pacific); Ph.D., 1905 (Johns Hopkins)

WILLIAM F. MIMS, *Lieutenant Commander, S.C., U.S.N., Assistant Professor of Naval Science*
B.S., 1940 (Georgia)

MARY FRANCES MINTON, M.A., *Instructor in English*
A.B., 1942, M.A., 1948 (Southern Methodist)

PAUL DIXON MINTON, M.S., *Part-time Instructor in Mathematics*
B.S., 1941, M.S., 1948 (Southern Methodist)

JUAN MIRANDA, *Instructor in Spanish*

HERBERT HALL MITCHELL, B.S., *Part-time Instructor in Economics*
B.S., 1939 (Alabama)

†RAOUL CEVARRE MITCHELL, Ph.D., *Visiting Associate Professor of Geology*
B.Sc. in Mathematics, 1933, B.Sc. in Geology, 1934 (Glasgow); Ph.D., 1937 (Vienna)

DAVID GEETING MONROE, LL.B., Ph.D., *Associate Professor of Political Science*
LL.B., 1926 (Baldwin-Wallace College); Ph.B., 1930 (Chicago); Ph.D., 1940 (Northwestern)

FRANK HARPER MOORE, A.M., *Part-time Instructor in English*
A.B., 1943 (Florida); A.M., 1948 (North Carolina)

‡HELEN LANNEAU MOORE, A.B., *Part-time Instructor in Latin*
A.B., 1944 (North Carolina)

JOHN AIKEN MOORE, B.S., A.M., *Instructor in Spanish*
B.S., 1942 (Davidson); A.M., 1948 (North Carolina)

JESSE J. MOORHEAD, B.S., *Lieutenant Colonel, U. S. Air Force, Professor of Air Science and Tactics*
B.S., 1937 (Clemson)

LUCY SHIELDS MORGAN, Ph.D., *Professor of Public Health Education*
A.B., 1922, M.S., 1932 (Tennessee); M.A., 1929 (Columbia); Ph.D., 1938 (Yale)

WILLIAM GARDNER MORGAN, A.B., M.D., *Associate University Physician and Instructor in Medicine*
A.B., 1927 (North Carolina); M.D., 1931 (Pennsylvania)

JOSEPH L. MORRISON, A.B., *Assistant Professor of Journalism*
A.B., 1940 (North Carolina)

JOHN CHARLES MORROW III, Ph.D., *Assistant Professor of Chemistry*
B.S., 1944 (North Carolina); Ph.D., 1949 (Massachusetts Institute of Technology)

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*Fall and winter quarters, 1949-1950.
†1949-1950.
‡Resigned, April 1, 1950.

ERNST MORWITZ, Dr. jur., *Lecturer in German*
Dr. juris utriusque, 1910 (Heidelberg)

LEO MOSER, M.A., *Part-time Instructor in Mathematics*
B.S., 1943 (Manitoba); M.A., 1944 (Toronto)

BEVERLEY T. MOSS, Ph.D., *Instructor in German*
B.A., 1929 (Missouri); A.M., 1930, Ph.D., 1940 (North Carolina)

OLIN TERRELL MOUZON, Ph.D., *Associate Professor of Economics*
B.S. in Commerce, 1933 (Southern Methodist); Ph.D., 1940 (North Carolina)

EDWARD FRANCIS MOYER, A.M., *Instructor in French*
A.B., 1936, A.M., 1937 (North Carolina)

CLYDE EDWARD MULLIS, A.M., *Associate Professor of Physical Education*
A.B., 1938, A.M., 1940 (North Carolina)

RODERICK GOLDSTON MURCHISON, JR., A.B., *Part-time Instructor in Geology and Geography*
A.B., 1939 (North Carolina)

JOHN RUSSELL MURPHY, M.A., *Assistant Football Coach and Instructor in Physical Education*
A.B., 1928 (Colorado); M.A., 1935 (Teachers College, Columbia)

ROBERT J. MURPHY, B.S., M.D., *Visiting Assistant Professor of Public Health Administration*
B.S., 1936 (State College, Tennessee); M.D., 1940 (Vanderbilt)

LOLA LEE MUSTARD, A.B., *Instructor in Journalism*
A.B., 1948 (North Carolina)

ARNOLD SAMUEL NASH, M.Sc., M.A., M.Sc.Econ., D.D., *Professor of the History of Religion*
B.Sc., 1928, M.Sc., 1930, M.A., 1933 (Liverpool); M.Sc.Econ., 1937 (London); D.D., 1946 (Coe College)

CHARLES LESLIE NELSON, A.B., *Instructor in Spanish*
A.B., 1948 (North Carolina)

A. KENNETH NESS, *Resident Artist and Professor of Art*
Diploma, 1932 (The Art Institute of Chicago)

WILLIAM S. NEWMAN, Ph.D., *Associate Professor of Music*
B.S., 1933, M.A., 1935, Ph.D., 1939 (Western Reserve)

ALBERT RAY NEWSOME, Ph.D., *Professor of History*
A.B., 1915 (North Carolina); M.A., 1922, Ph.D., 1929 (Michigan)

FRANCIS LANNEAU NEWTON, A.M., *Part-time Instructor in Latin*
A.B., 1947, A.M., 1948 (Wake Forest)

GEORGE EDWARD NICHOLSON, JR., Ph.D., *Assistant Professor in the Institute of Statistics*
A.B., 1940, A.M., 1941, Ph.D., 1948 (North Carolina)

EDWARD WILLIAM NOLAND, Ph.D., *Professor of Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1930, M.A., 1936 (West Virginia); Ph.D., 1944 (Cornell)

JOHN WILLIAM ROY NORTON, A.B., M.D., M.P.H., *Visiting Associate Professor of Public Health*
A.B., 1920 (Duke); M.D., 1928 (Vanderbilt); M.P.H., 1936 (Harvard School of Public Health)

*CARL JOSEF ODENKIRCHEN, A.M., *Instructor in French and Spanish*
A.B., 1942 (College of Charleston [S. C.]); A.M., 1947 (Chicago)

HOWARD WASHINGTON ODUM, Ph.D., LL.D., Litt.D., L.H.D., *Kenan Professor of Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1904 (Emory); A.M., 1906 (Mississippi); Ph.D., 1909 (Clark); Ph.D., 1910 (Columbia); LL.D. (Emory, Harvard); Litt.D. (College of the Ozarks); L.H.D. (Clark)

WILLIAM ANDERSON OLSEN, A.M., *Professor of English*
A.B., 1923 (Cornell); A.M., 1928 (North Carolina)

JOHN TETTEMER O'NEIL, Ph.D., *Associate Professor of Finance*
S.B., 1934 (North Carolina); M.B.A., 1936 (Harvard); Ph.D., 1948 (Northwestern)

WALTER E. ORGANIST, A.B., *Part-time Instructor in Psychology*
A.B., 1940 (Pennsylvania State)

CLIFFORD EDNEY PACE, A.B., LL.B., *Assistant Director of the Institute of Government*
A.B., 1939, LL.B., 1942 (North Carolina)

HOWARD PAGE, M.A., *Part-time Instructor in Psychology*
A.B., 1945, M.A., 1946 (Florida)

†GREGORY LANSING PAINE, Ph.D., *Professor of English, Emeritus*
Ph.B., 1914, A.M., 1920, Ph.D., 1924 (Chicago)

EVERETT D. PALMATIER, B.Sc., *Assistant Professor of Physics*
B.Sc., 1938 (Manitoba)

JOHN ALBERT PARKER, S.B., M.Arch., M.C.P., *Professor of Planning and Research Professor in the Institute for Research in Social Science*
S.B., 1931, M. Arch., 1933, M.C.P., 1946 (Massachusetts Institute of Technology)

‡J. ROY PARKER, A.B., *Professor of Journalism*
A.B., 1915 (Wake Forest College)

JOHN WILLIAM PARKER, A.M., *Professor of Dramatic Art*
A.B. in Educ., 1930, A.M., 1937 (North Carolina)

GENE B. PARRISH, A.B., *Part-time Instructor in Mathematics*
A.B., 1949 (North Carolina)

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*Resigned, January 1, 1950.
†Deceased, February 17, 1950.
‡Absent on leave, 1949-1950.

James M. Parrish, M.S., *Part-time Instructor in Economics*
B.S., 1943, M.S., 1948 (Alabama)

Paul Pascal, A.B., *Part-time Instructor in Latin*
A.B., 1948 (Vermont)

Frederick Geer Patterson, A.B., M.D., *Instructor in Medicine*
A.B., 1933 (North Carolina); M.D., 1937 (Pennsylvania)

James Welch Patton, Ph.D., *Professor of History and Director of the Southern Historical Collection*
A.B., 1924 (Vanderbilt); A.M., 1925, Ph.D., 1929 (North Carolina)

James Singleton Patty, A.M., *Instructor in French*
A.B., 1945, A.M., 1947 (North Carolina)

Aubrey Hampton Payne, B.S., *Part-time Instructor in Mathematics*
B.S., 1943 (Appalachian State Teachers College)

Erle Ewart Peacock, M.B.A., C.P.A., *Professor of Accounting*
A.B., 1914 (Georgia); M.B.A., 1916 (Harvard); C.P.A. (State of North Carolina)

William Henry Peacock, Ph.D., *Associate Professor of Physical Education*
A.B., 1932 (Maryville College); A.M., 1940, Ph.D., 1945 (North Carolina)

John Hunter Peak, A.B., *Instructor in Spanish*
A.B., 1941 (Hampden-Sydney)

Richard Lehmer Pearse, M.D., *Lecturer in Obstetrics*
M.D., 1931 (Harvard)

Frances Mitchell Pedigo, A.M., *Part-time Instructor in English*
A.B., 1932 (Florida State College for Women); A.M., 1946 (North Carolina)

Talmage Lee Peele, A.B., M.D., *Visiting Lecturer in Neurology*
A.B., 1929, M.D., 1934 (Duke)

Carl Hamilton Pegg, Ph.D., *Professor of History*
A.B. in Educ., 1927, A.M., 1927, Ph.D., 1930 (North Carolina)

William Lawrence Pendergraph, B.S., *Part-time Instructor in Accounting*
B.S., 1946 (North Carolina)

William R. Pendergrass, A.M., *Instructor in Botany*
B.S., 1942 (Furman); A.M., 1949 (North Carolina)

George Dial Penick, S.B., M.D., *Instructor in Pathology*
S.B., 1943 (North Carolina); M.D., 1946 (Harvard)

H. Arnold Perry, Ed.D., *Associate Professor of Education*
A.B., 1926, Ed.M., 1933 (Duke); Ed.D., 1943 (Columbia)

William Decatur Perry, Ed.D., *Associate Professor of Education and Director of the University Testing Service*
A.B. in Educ., 1929 (North Carolina); M.A., 1934 (Columbia); Ed.D., 1937 (Teachers College, Columbia)

RALPH WILLIAM PFOUTS, M.A., *Lecturer in Economics*
A.B., 1942, M.A., 1947 (Kansas)

JARRETT CALVIN PHARR, A.B., *Instructor in Spanish*
A.B., 1949 (Chattanooga)

CLARENCE PHILBROOK, Ph.D., *Associate Professor of Economics*
A.B., 1936, Ph.D., 1949 (Chicago)

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education, Director of the Summer School and of Teachers' Placement Bureau*
A.B., 1913 (North Carolina); M.A., 1942 (Columbia)

ANDREW WARREN PIERPONT, A.B., M.B.A., *Lecturer in Business Administration*
A.B., 1928 (Washington and Lee); M.B.A., 1931 (Harvard)

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Professor of History and Political Science and Dean of the Graduate School*
A.B., 1910, A.M., 1911 (Alabama); M.A., 1912, Ph.D., 1916 (Columbia); Litt.D. (Boston)

TULLIO JOSEPH PIGNANI, M.S., *Part-time Instructor in Mathematics*
B.S., 1948 (State Teacher's College, Indiana, Pa.); M.S., 1949 (Bucknell)

WILLIAM HOWARD PLEMMONS, Ph.D., *Professor of Education*
A.B., 1928 (Wake Forest College); A.M., 1935 (Duke); Ph.D., 1943 (North Carolina)

LEON M. POLLANDER, *Lecturer in Journalism*

MARY GRAY PORTER, A.B., *Instructor in German*
A.B., 1947 (Alabama)

WILLIAM POTEAT, A.B., B.D., *Instructor in Philosophy*
A.B., 1941 (Oberlin); B.D., 1944 (Yale)

*MAURICE CARY POWERS, A.B., *Part-time Instructor in Geology*
A.B., 1948 (North Carolina)

CARLETON ESTEY PRESTON, Ph.D., *Professor of Education, Emeritus*
A.B., 1899, A.M., 1900, Ph.D., 1902 (Harvard)

†DANIEL O'HAVER PRICE, Ph.D., *Associate Professor of Sociology and Research Associate in the Institute for Research in Social Science*
B.S., 1939 (Florida Southern); A.M., 1942, Ph.D., 1948 (North Carolina)

RUTH I. PRICE, M.S., *Assistant Professor of Physical Education*
B.S., 1926 (Columbia); M.S., 1936 (Southern California)

JAMES ROY PRINCE, A.M., *Instructor in French*
A.B., 1931 (South Carolina); A.M., 1938 (North Carolina)

‡WILLIAM MEADE PRINCE, *Lecturer in Art*

MORGAN H. PRITCHETT, A.B., *Instructor in German*
A.B., 1942 (Johns Hopkins)

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*Spring quarter, 1949-1950.
†Absent on leave, spring quarter, 1949-1950.
‡Absent on leave.

*WILLIAM FREDERICK PROUTY, Ph.D., *Professor of Economic and Structural Geology*
B.S., 1903, M.S., 1904 (Syracuse); Ph.D., 1906 (Johns Hopkins)

PERCY HALL QUINLAN, B.P.E., *Instructor in Physical Education*
B.P.E., 1919 (Springfield College)

WALTER WAGNER RABB, A.M., *Assistant Professor of Physical Education*
B.S., 1937 (North Carolina State College of A. and E.); A.M. in Educ., 1941 (North Carolina)

ALBERT ERNEST RADFORD, Ph.D., *Assistant Professor of Botany*
B.S., 1939 (Furman); Ph.D., 1948 (North Carolina)

GEORGE JOHN RADMAN, A.M., *Instructor in Physical Education and Assistant Football Coach*
A.B., 1940, A.M., 1947 (North Carolina)

ANGUS C. RANDOLPH, A.B., M.D., *Psychiatric Consultant*
A.B., 1936 (Princeton); M.D., 1940 (Virginia)

RICHARD BEVERLY RANEY, A.B., M.D., *Lecturer in Orthopedic Surgery*
A.B., 1926 (North Carolina); M.D., 1930 (Harvard)

MURPHY DALE RANSON, S.B.Comm., *Instructor in Physical Education*
S.B. Commerce, 1924 (North Carolina)

JESSIE REHDER, M.A., *Instructor in English*
A.B., 1929 (Randolph-Macon); M.A., 1931 (Columbia)

HERBERT WILLIAM REICHERT, Ph.D., *Assistant Professor of German*
B.A., 1938, M.A., 1940 (Columbia); Ph.D., 1942 (Illinois)

†JOHN REMBERT, M.A., *Assistant Professor of Art*
A.B., 1941 (Alabama); M.A., 1947 (Columbia)

ISAAC NEWTON REYNOLDS, B.S., *Part-time Instructor in Accounting*
B.S., 1948 (East Carolina Teachers College)

THOMAS LEE REYNOLDS, B.S., A.M., *Part-time Instructor in Mathematics*
B.S., 1938 (Guilford College); A.M., 1948 (North Carolina)

OSCAR KNEFLER RICE, Ph.D., *Professor of Chemistry*
B.S., 1924, Ph.D., 1926 (California)

WILLIAM PERRY RICHARDSON, A.B., M.D., M.P.H., *Research Professor of Public Health Administration*
A.B., 1926 (Wake Forest College); M.D., 1928 (Medical College of Virginia); M.P.H., 1933 (Johns Hopkins)

‡FRED LEWIS RIGHTS, Ph.D., *Associate Professor of Bacteriology*
B.S. in Chem. Eng'g., 1933, M.S. in Bacteriology, 1935 (Lehigh); Ph.D., 1947 (Columbia)

WILLIAM WILLIS RITTER, JR., S.B., A.B., *Instructor in Spanish*
S.B., 1946, A.B., 1948 (North Carolina)

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*Deceased, June 27, 1949.
†Resigned, September 1, 1949.
‡Resigned, June 30, 1950.

HERBERT ELLIS ROBBINS, Ph.D., *Associate Professor of Mathematical Statistics*
A.B., 1935, A.M., 1936, Ph.D., 1938 (Harvard)

NELLIE ROBERSON, B.S., A.B., *Library Extension Librarian*
B.S., 1902 (Richmond Woman's College); A.B., 1921 (North Carolina)

*CHARLES BASKERVILL ROBSON, Ph.D., *Professor of Political Science*
A.B., 1919 (Davidson); A.M., 1924 (Princeton); Ph.D., 1930 (North Carolina)

C. LELAND RODGERS, M.A., *Part-time Instructor in Botany*
B.S., 1939 (Furman); M.A., 1942 (Duke)

ARTHUR ROE, Ph.D., *Professor of Chemistry*
B.A., 1933 (Oberlin College); M.A., 1935 (Colorado College); Ph.D., 1938 (Northwestern)

EUGENE WOODROW ROELOFS, Ph.D., *Associate Professor in the Institute of Fisheries Research*
B.S., 1936, M.S., 1938, Ph.D., 1941 (Michigan State)

HENRY BLOUNT ROLLINS, A.M., *Part-time Instructor in English*
A.B., 1947 (Wofford); A.M., 1948 (North Carolina)

MICHAEL Z. RONMAN, Ed.M., *Instructor in Physical Education*
B.S., 1935, Ed.M., 1938 (Pennsylvania State College)

IRA WINFIELD ROSE, Ph.G., *Professor of Practical Pharmacy and Acting Dean of the School of Pharmacy*
Ph.G., 1906 (North Carolina)

NATHAN ROSEN, Sc.D., *Professor of Physics*
S.B., 1929, S.M., 1930, Sc.D., 1932 (Mass. Inst. of Tech.)

BARBARA JANE ROSENAU, A.B., M.S.P.H., *Research Associate in Experimental Medicine*
A.B., 1944 (Wheaton College, Massachusetts); M.S.P.H., 1946 (North Carolina)

WILLIAM EVERETT ROSENSTENGEL, Ph.D., *Professor of Education*
B.S. in Ed., 1923 (Northeast Missouri State Teachers College); A.M., 1927, Ph.D., 1931 (Missouri)

FRANZ ERNEST ROSS, A.B., *Part-time Instructor in Mathematics*
A.B., 1949 (Kentucky)

ROBERT ALEXANDER ROSS, S.B., M.D., *Lecturer in Obstetrics*
S.B., 1920 (North Carolina); M.D., 1922 (Pennsylvania)

PHIFER PAUL ROTHMAN, A.B., *Instructor in Spanish*
A.B., 1948 (North Carolina)

SAMARENDRA NATH ROY, M.Sc., *Professor of Mathematical Statistics*
B.Sc., 1928, M.Sc., 1931 (Calcutta)

CHARLES EVERETT RUSH, A.B., B.L.S., A.M., *Professor of Library Science, Director of Libraries, and Chairman of the Library Division*
A.B., 1905 (Earlham College); B.L.S., 1908 (New York State Library School); Hon. A.M. (Yale)

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*Absent on leave, fall quarter, 1949.

BILLY MAURICE RUSSELL, A.B., *Instructor in Spanish*
A.B., 1948 (Birmingham-Southern)

CHARLES PHILLIPS RUSSELL, A.B., *Professor of Journalism*
A.B., 1904 (North Carolina)

HARRY KITSUN RUSSELL, Ph.D., *Professor of English*
A.B., 1923 (Davidson); A.M., 1928, Ph.D., 1931 (North Carolina)

JOHN MORRIS RYAN, B.S., *Part-time Instructor in Economics*
B.S., 1949 (Georgia Institute of Technology)

*WILL CARSON RYAN, Ph.D., Ed.D., LL.D., *Kenan Professor of Education*
A.B., 1907 (Harvard); Ph.D., Ed.D., 1918, LL.D. (George Washington)

JOSEF E. RYBERG, A.B., *Instructor in German*
A.B., 1947 (North Carolina)

ALTON GUY SADLER, M.S., C.P.A., *Associate Professor of Accounting*
A.B., 1930 (Duke); M.S., 1937 (North Carolina); C.P.A. (State of Georgia)

ALBERT NEELY SANDERS, A.M., *Instructor in Social Science*
A.B., 1934 (Furman); A.M., 1948 (North Carolina)

WILEY BRITTON SANDERS, Ph.D., *Professor of Sociology*
A.B., 1919, A.M., 1920 (Emory); A.M., 1921 (North Carolina); Ph.D., 1929 (Chicago)

WILLIAM M. SANFORD, B.S., B.S.J., *Captain, U. S. Air Force, Assistant Professor of Air Science and Tactics*
B.S., B.S.J., 1938 (Oregon)

EVERETT WALTER SCHADT, M.A., *Part-time Instructor in Economics*
B.B.A., 1932 (Boston); M.A., 1936 (Texas)

ROBERT SCHENKKAN, A.M., *Assistant Professor of Radio*
A.B., 1941 (Virginia); A.M., 1946 (North Carolina)

HERMAN MAX SCHIEBEL, A.B., M.D., *Lecturer in Surgery*
M.D., 1933 (Johns Hopkins)

JAN PHILIP SCHINHAN, Ph.D., *Professor of Music*
A.B., 1931, M.A., 1933 (California); Ph.D., 1937 (Vienna)

GUSTAV THEODOR SCHWENNING, Ph.D., *Professor of Business Administration*
B.H., 1920 (Springfield); M.A., 1921, Ph.D., 1925 (Clark)

THOMAS ELISHA SCOTT, JR., A.M., *Instructor in French and Spanish*
A.B., 1937 (Emory); A.M., 1938 (North Carolina)

TOM SCOTT, M.A., *Head Basketball Coach*
B.S., 1930 (Kansas State Teachers College); M.A., 1937 (Iowa)

JACK BENTON SCROGGS, M.A., *Instructor in Social Science*
A.B., 1947, M.A., 1948 (Arkansas)

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*Absent on leave.

ROSS SCROGGS, B.S., *Director of Still Photography, Communication Center, and Instructor in Physics*
B.S., 1942 (North Carolina)

HUGH NELSON SEAY, JR., B.A., *Instructor in Spanish*
B.A., 1949 (Randolph-Macon)

STUART WILSON SECHRIEST, A.B., *Associate Professor of Journalism*
A.B., 1935 (North Carolina)

BEN MOORE SEELBINDER, B.S., *Part-time Instructor in Mathematics*
B.S., 1945 (Mississippi Delta State Teachers College)

MARGARET BUTLER SEELBINDER, A.B., *Part-time Instructor in Mathematics*
A.B., 1946 (Randolph-Macon Woman's College)

SAMUEL SELDEN, A.B., *Professor of Dramatic Art and Director of The Carolina Playmakers*
A.B., 1922 (Yale)

FRED SEMENIUK, Ph.D., *Assistant Professor of Pharmaceutical Chemistry*
B.Sc., 1939 (University of Alberta); Ph.D., 1947 (Purdue)

WILLIARD MANGUS SESSLER, S.B., *Part-time Instructor in Physics*
S.B., 1948 (North Carolina)

LAWRENCE ALBRIGHT SHARPE, A.B., *Instructor in Spanish*
A.B., 1940 (North Carolina)

ROBERT BOIES SHARPE, Ph.D., *Professor of English*
A.B., 1918 (Wesleyan); M.A., 1923 (Wisconsin); Ph.D., 1928 (Yale)

PAUL EDMONDSON SHEARIN, Ph.D., *Professor of Physics*
A.B. in Educ., 1929, A.M., 1930 (North Carolina); Ph.D., 1934 (Ohio State)

FREDERICK CARLYLE SHEPARD, Ph.D., *Adviser to Veterans and Adviser in the General College*
A.B., 1921, A.M., 1926, Ph.D., 1938 (North Carolina)

GEORGE EDWARD SHEPARD, Ed.D., *Associate Professor of Physical Education*
S.B., 1929 (North Carolina); M.A., 1940, Ed.D., 1948 (Columbia)

CECIL GEORGE SHEPS, M.D., M.P.H., *Associate Professor of Public Health Administration and Research Associate in the Institute for Research in Social Science*
M.D., 1936 (Manitoba); M.P.H., 1947 (Yale)

CLAUDE C. SHOTTS, B.S. in E.E., B.D., *General Secretary, Y.M.C.A.*
B.S. in E.E., 1922 (Alabama); B.D., 1925 (Yale)

WILLIAM L. SIEMON, B.S., *Part-time Instructor in Philosophy*
B.S., 1942 (Bethany)

JOSEPH CARLYLE SITTERSON, Ph.D., *Professor of History*
A.B., 1931, A.M., 1932, Ph.D., 1937 (North Carolina)

EARL ANDERSON SLOCUM, M.M., *Professor of Music*
B.Mus., 1931, M.M., 1936 (Michigan)

IRENE SMART, *Instructor in Dramatic Art*

CARL GREY SNAVELY, M.A., *Head Coach of Football*
A.B., 1915 (Lebanon Valley College); M.A., 1933 (Bucknell)

ELIZABETH MAY SNOW, B.S., A.M., *Part-time Instructor in Mathematics*
B.S., 1941 (Mary Washington College); A.M., 1948 (North Carolina)

CLEMENS SOMMER, Ph.D., *Professor of the History of Art*
Ph.D., 1919 (Freiburg)

DANIEL CREIGHTON SOSSOMON, A.M., *Instructor in Social Science*
A.B., A.M., 1948 (North Carolina)

WALTER SPEARMAN, A.M., *Professor of Journalism*
A.B., 1929, A.M., 1937 (North Carolina)

JOHN HAMILTON DOWDELL SPENCER, A.M., *Part-time Instructor in Economics*
A.B., 1941, A.M., 1942 (Florida)

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*
A.B., 1920 (North Carolina); B.Litt., 1922 (Oxford)

JULIA CHERRY SPRUILL, A.M., *Lecturer in Social Science*
A.B., 1920 (Woman's College, U. N. C.); A.M., 1923 (North Carolina)

HERMAN HENRY STAAB, M.A., *Associate Professor of Romance Languages, Emeritus*
B.A., M.A., 1912 (University of the South)

MRS. MARVIN HENDRIX STACY, *Dean of Women, Emeritus*
Graduate, 1907 (N. C. State Normal and Industrial College)

ROBERT LEE STALLINGS, JR., S.M., *Associate Professor of Accounting*
B.S., 1938 (North Carolina State); S.M., 1947 (North Carolina)

THOMAS MELVILLE STANBACK, JR., M.B.A., *Assistant Professor of Business Administration*
S.B., 1940 (North Carolina); M.B.A., 1942 (Harvard)

LOIS FOOTE STANFORD, M.D., *Instructor in Medicine*
M.D., 1921 (Pennsylvania)

WILLIAM RANEY STANFORD, A.B., M.D., *Instructor in Medicine*
A.B., 1915 (North Carolina); M.D., 1919 (Pennsylvania)

DANIEL DEMPSEY STANLEY, A.B., *Instructor in Spanish*
A.B., 1949 (Georgia)

JOHN MARCELLUS STEADMAN III, Ph.D., *Assistant Professor of English*
A.B., 1940, M.A., 1941 (Emory); M.A., 1948, Ph.D., 1949 (Princeton)

JOSEPH FLAKE STEELMAN, A.M., *Instructor in Social Science*
A.B., 1943, A.M., 1947 (North Carolina)

LALA CARR STEELMAN, A.M., *Instructor in Social Science*
A.B., 1943 (Georgia State College for Women); A.M., 1946 (North Carolina)

MELVIN SANFORD STEINBERG, S.B., *Part-time Instructor in Physics*
S.B., 1949 (North Carolina)

EDWARD A. STEPHENSON, M.A., *Part-time Instructor in English*
A.B., 1939, M.A., 1941 (Florida)

*LLOYD WILLIAM STEPHENSON, Ph.D., *Visiting Professor of Geology*
Ph.B., 1903 (Scio College); Ph.D., 1907 (Johns Hopkins)

STERLING AUBREY STOUDEMIRE, Ph.D., *Professor of Spanish*
A.B., 1923, A.M., 1924, Ph.D., 1930 (North Carolina)

DAN HARRINGTON STOUT, A.B., *Instructor in Social Science*
A.B., 1940 (North Carolina)

†FLOYD STOVALL, Ph.D., *Professor of English*
A.B., 1923, M.A., 1924, Ph.D., 1927 (Texas)

JOSEPH WARD STRALEY, Ph.D., *Associate Professor of Physics*
B.S. in Ed., 1936 (Bowling Green State University); M.Sc., 1937, Ph.D., 1941 (Ohio State)

WILLIAM RINGGOLD STRAUGHN, JR., M.S., *Assistant Professor of Bacteriology*
B.S., 1935 (Penn. State Teachers College); M.S., 1940 (Cornell)

HAMMOND STRAYHORN, A.M., *Instructor in Physical Education*
S.B., 1938, A.M., 1949 (North Carolina)

WILLIAM E. STRICKLAND, A.M., *Instructor in French*
A.B., B.S., 1940 (Southern College); A.M., 1942 (North Carolina)

ELVIN E. STROWD, A.B., *Instructor in Social Science*
A.B., 1948 (Guilford College)

OTTO STUHLMAN, JR., Ph.D., *Professor of Physics*
B.A., 1907 (Cincinnati); M.A., 1909 (Illinois); Ph.D., 1911 (Princeton)

HENRY TRACY STURCKEN, A.B., *Instructor in Spanish*
A.B., 1947 (College of Charleston [S. C.])

JACK SUBERMAN, M.A., *Part-time Instructor in English*
A.B., 1946, M.A., 1947 (Florida)

CELESTINE J. SULLIVAN, JR., Ph.D., *Visiting Lecturer in Philosophy*
A.B., 1927, M.A., 1928, Ph.D., 1931 (California)

BENJAMIN ALBRITTON SUMMERLIN, JR., A.B., *Instructor in Spanish*
A.B., 1948 (North Carolina)

ALBERT IRVING SUSKIN, Ph.D., *Associate Professor of Latin and Adviser in the College of Arts and Sciences*
A.B. in Educ., 1931, A.M., 1932, Ph.D., 1937 (North Carolina)

WILLIAM OWEN SHEPPARD SUTHERLAND, JR., A.M., *Part-time Instructor in English*
A.B., 1942, A.M., 1947 (North Carolina)

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*Winter and spring quarters, 1949-1950.
†Beginning January 1, 1950.

BENJAMIN FRANKLIN SWALIN, Ph.D., *Professor of Music in Extension*
B.S., 1928, M.A., 1930 (Columbia); 1923-1930 (Institute of Musical Art, New York); Graduate, 1932 (Hochschule für Musik Und Kapellmeisterschule, Vienna); Ph.D., 1932 (Vienna)

MARGARET CATHERINE SWANTON, M.D., *Instructor in Pathology*
A.B., 1943 (North Carolina); M.D., 1946 (Johns Hopkins)

PAUL SWOFFORD, B.S., *Part-time Instructor in Mathematics*
B.S., 1942 (Appalachian State Teachers College)

ERNEST WILLIAM TALBERT, Ph.D., *Professor of English*
A.B., 1929 (San Jose State College); M.A., 1931, Ph.D., 1936 (Stanford)

GEORGE COFFIN TAYLOR, Ph.D., Litt.D., *Kenan Professor of English, Emeritus*
A.B., 1897 (South Carolina); A.M., 1899 (Harvard); Ph.D., 1906 (Chicago); Litt.D. (South Carolina)

HARDEN FRANKLIN TAYLOR, A.B., D.Sc., *Research Professor in the Institute of Fisheries Research*
A.B. (Trinity College); D.Sc. (Duke)

JAMES ALEXANDER TAYLOR, A.B., M.D., *Instructor in Pharmacology and Instructor in Medicine*
A.B., 1939 (North Carolina); M.D., 1943 (Harvard)

LOUIS HOWARD THACKER, S.B., *Part-time Instructor in Physics*
S.B., 1949 (North Carolina)

WILLIAM WAYT THOMAS, JR., A.B., *Instructor in Social Science*
A.B., 1947 (North Carolina)

FREDERICK A. THOMPSON, JR., M.D., *Assistant Professor of Experimental Medicine*
M.D., 1946 (Duke)

HERMAN ORA THOMPSON, Ph.D., *Associate Professor of Pharmacy*
S.B. in Phar., 1937 (North Carolina); M.S., 1940, Ph.D., 1944 (Purdue)

MARY LINDSAY THORNTON, A.B., A.M., *Librarian, North Carolina Collection*
A.B., 1939, A.M., 1943 (North Carolina)

JAMES STERLING TIPPETT, B.S., *Visiting Lecturer in Extension Teaching*
B.S., 1915 (Missouri)

JOHN L. TISON, M.A., *Part-time Instructor in English*
A.B., 1934 (University of the South); M.A., 1936 (Syracuse)

HENRY ROLAND TOTTEN, Ph.D., *Professor of Botany*
A.B., 1913, A.M., 1914, Ph.D., 1923 (North Carolina)

RALPH MCCOY TRIMBLE, C.E., S.M., *Professor of Applied Mathematics*
C.E., 1921 (Virginia); S.M., 1927 (North Carolina)

WILLIAM NEWTON TURNER, M.S., *Part-time Instructor in Geography*
B.S., 1930, M.S., 1931 (Tennessee)

EUNICE NICKERSON TYLER, Ph.D., *Associate Professor of Public Health Education*
Ph.B., 1931 (Brown); M.P.H., 1936, Ph.D., 1946 (Yale)

SHEPPARD YOUNG TYREE, JR., Ph.D., *Associate Professor of Chemistry*
B.S., 1942, Ph.D., 1946 (Massachusetts Institute of Technology)

BERTHOLD LOUIS ULLMAN, Ph.D., *Kenan Professor of the Classical Languages and Literatures*
A.B., 1903, Ph.D., 1908 (Chicago)

RUPERT BAYLESS VANCE, Ph.D., LL.D., *Kenan Professor of Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1920 (Henderson-Brown); A.M., 1921 (Vanderbilt); Ph.D., 1928 (North Carolina); LL.D. (Hendrix College)

CHARLES DURWARD VAN CLEAVE, Ph.D., *Associate Professor of Anatomy*
A.B., 1925 (Colorado); Ph.D., 1928 (Chicago)

HAROLD P. VAN COTT, A.B., *Part-time Instructor in Psychology*
A.B., 1948 (Rochester)

MAURICE TAYLOR VAN HECKE, Ph.B., J.D., *Professor of Law*
Ph.B., 1916, J.D., 1917 (Chicago)

ROBERT GAIGE VAN NOSTRAND, M.S., *Part-time Instructor in Geology*
B.S., 1942, M.S., 1949 (Missouri School of Mines)

WALTER WEDDLE VAUGHAN, A.B., M.D., *Lecturer in Radiographic Anatomy*
A.B., 1929 (North Carolina); M.D., 1933 (Jefferson Medical College)

ROBERT Z. VAUSE, JR., M.A., *Part-time Instructor in Mathematics*
B.S., 1943 (South Carolina); M.A., 1947 (Duke)

GUELDA ELLIOTT VON BECKERATH, A.B., *Commerce Librarian*
A.B., 1943 (North Carolina)

ELAINE VON OESEN, B.A., A.B. in L.S., *Instructor in Library Science*
B.A., 1938 (Lenoir-Rhyne); A.B. in L.S., 1940 (North Carolina)

ROGERS C. WADE, S.B., *Part-time Lecturer in Accounting*
S.B., 1929 (North Carolina)

PAUL WOODFORD WAGER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*
B.S., 1917 (Hobart College); A.M., 1920 (Haverford College); Ph.D., 1927 (North Carolina)

GEORGE W. WALKER, M.A., *Part-time Instructor in English*
A.B., 1938 (Alma College); M.A., 1946 (Wayne University)

DON H. WALTHER, Ph.D., *Assistant Professor of Spanish and Portuguese*
A.B., 1938 (Miami University); A.M., 1940, Ph.D., 1948 (North Carolina)

BENJAMIN EVANS WARNER, S.B., *Part-time Instructor in Geology*
S.B., 1949 (North Carolina)

*FREDERICK HENRY WEAVER, A.B., *Dean of Students*
A.B., 1937 (North Carolina)

ALEXANDER WEBB, JR., A.B., M.D., *Lecturer in Surgical Anatomy*
A.B., 1933 (North Carolina); M.D., 1937 (Harvard)

JAMES MURRAY WEBB, A.B., M.C.P., *Associate Professor of Planning*
A.B. in Architecture, 1937 (California); M.C.P., 1946 (Massachusetts Institute of Technology)

WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences*
A.B., 1929, A.M., 1930 (Southern California); Ph.D., 1935 (Stanford)

JAMES AUGUSTUS WESTBROOK, B.S.C.E., M.S.S.E., *Visiting Instructor in Sanitary Engineering*
B.S.C.E., 1935 (North Carolina); M.S.S.E., 1937 (Harvard)

ROBERT HASLEY WETTACH, M.A., LL.B., S.J.D., *Professor of Law*
A.B., 1913, M.A., 1914, LL.B., 1917 (Pittsburgh); S.J.D., 1921 (Harvard)

†M. JUDSON WHITE, M.A., *Part-time Instructor in Psychology*
A.B., 1937, M.A., 1940 (East Carolina Teachers College)

RICHARD ARNOLD WHITE, *Instructor in Physical Education*

WILLIAM ALEXANDER WHITE, Ph.D., *Associate Professor of Geology*
A.B., 1930 (Duke); A.M., 1931 (North Carolina); M.S., 1934 (Montana School of Mines); Ph.D., 1938 (North Carolina)

DONALD FREDERICK WHITEHEAD, M.A., *Acting Assistant Professor of Political Science*
A.B., 1948 (Wichita); M.A., 1948 (Chicago)

ARTHUR MURRAY WHITEHILL, JR., Ph.D., *Acting Assistant Professor of Economics*
B.S., 1942, M.A., 1943, Ph.D., 1945 (Virginia)

MAURICE WHITTINGHILL, Ph.D., *Associate Professor of Zoology*
A.B., 1931 (Dartmouth College); Ph.D., 1937 (Michigan)

WILLIAM M. WHYBURN, Ph.D., LL.D., *Kenan Professor of Mathematics*
A.B., 1922, M.A., 1923, Ph.D., 1927 (Texas); LL.D. (Texas Technological College)

ALAN HOLDER WILEY, A.B., *Instructor in Social Science*
A.B., 1948 (North Carolina)

WILLIAM LEON WILEY, Ph.D., *Professor of French*
A.B., 1921 (Chattanooga); A.M., 1925, Ph.D., 1930 (Harvard)

JEAN PAUL WILLIAMS, B.S., *Instructor in Chemistry*
B.S., 1940 (Kent State University)

LENA MAE WILLIAMS, A.B., A.M., S.B. in L.S., *Order Librarian*
A.B., 1930, A.M., 1931, S.B. in L.S., 1944 (North Carolina)

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*Absent on leave, 1949-1950.
†Resigned, March 20, 1950.

RAY WYATT WILLIAMS, M.A., *Instructor in Social Science*
A.B., 1941 (North Carolina); M.A., 1946 (Emory)

LOUIS ROUND WILSON, Ph.D., Litt.D., LL.D., L.H.D., *Professor of Library Science and Administration*
A.B., 1899, A.M., 1902, Ph.D., 1905 (North Carolina); Litt.D. (Univ. of Denver); LL.D. (Haverford, North Carolina); L.H.D. (Catawba)

REX SHELTON WINSLOW, Ph.D., *Professor of Economics and Director, Bureau of Business Services and Research, School of Commerce*
A.B., 1923 (Simpson College); A.M., 1929 (Illinois); Ph.D., 1936 (North Carolina)

ARTHUR SIMEON WINSOR, Ph.D., *Professor of Mathematics*
A.B., 1914, A.M., 1915 (Mount Allison College); Ph.D., 1927 (Johns Hopkins)

HARRY DEMERLE WOLF, Ph.D., *Professor of Economics*
B.S., 1922 (Kansas State Teachers College); A.M., 1923, Ph.D., 1926 (Chicago)

IRVIN S. WOLF, Ph.D., *Associate Professor of Psychology*
A.B., 1937 (Manchester College); M.A., 1939, Ph.D., 1948 (Indiana)

GEORGE ELLIOTT WOLFF, M.A., *Part-time Instructor in Political Science*
A.B., 1948, M.A., 1949 (Florida)

EDWARD JAMES WOODHOUSE, B.A., LL.B., *Professor of Political Science*
B.A., 1903 (Randolph-Macon); LL.B., 1907 (Virginia)

GEORGE MILTON WOODWARD, M.A., *Lecturer in Economics*
A.B., 1932, M.A., 1933 (Vanderbilt)

JOHN BROOKS WOOSLEY, Ph.D., *Professor of Economics*
A.B., 1912 (Guilford College); A.B., 1913, A.M., 1914 (Haverford); Ph.D., 1931 (Chicago)

JOHN JOSEPH WRIGHT, A.B., M.D., M.P.H., *Professor of Public Health Administration*
A.B., 1931, M.D., 1935 (Vanderbilt); M.P.H., 1939 (Johns Hopkins)

EARL WYNN, M.S., *Professor of Radio and Communication and Director of the Communication Center*
A.B., 1932 (Augustana College); M.S., 1934 (Northwestern)

HARRY CLAY YEATMAN, A.M., *Instructor in Zoology*
A.B., 1939, A.M., 1942 (North Carolina)

FRANCES LYDIA YOCOM, A.B., B.L.S., M.A. in L.S., *Catalogue Librarian*
A.B., 1921 (Oberlin); B.L.S., 1931 (Western Reserve); M.A. in L.S., 1939 (California)

DAVID ALEXANDER YOUNG, A.B., M.D., *Lecturer in Psychiatry*
A.B., 1928 (North Carolina); M.D., 1931 (Harvard)

JOHN E. YOUNG, A.B., *Instructor in Radio*
A.B., 1948 (North Carolina)

JOHNNY LEROY YOUNG, A.B., *Instructor in French*
A.B., 1947 (Catawba)

LOUIS JENNINGS ZAHN, M.A., *Instructor in Spanish*
A.B., 1947, M.A., 1949 (Emory)

ELMO R. ZUMWALT, B.S., *Lieutenant, U. S. Navy, Assistant Professor of Naval Science*
B.S., 1942 (U. S. Naval Academy)

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## GRADUATE APPOINTMENTS, 1949-1950

### Teaching Fellows

ROY EDWIN AYCOCK, A.B. ..... English
JAMES EDWARD BAGWELL, B.S. ..... Geology and Geography
GASTON SWINDELL BRUTON, B.S. ..... Mathematics
*FRANCIS WORTHINGTON CHAPMAN, JR., B.S. ..... Chemistry
HAROLD RICH CHEEK, A.B. ..... Romance Languages
CLAUDE WILLEY HINTON, A.B. ..... Zoology
JOHN LAURENCE HODGES, M.A. ..... German
†ROBERT EARL KASKE, A.M. ..... English
†FRANKLIN WARD JAMES, B.S. ..... Chemistry
ARTHUR LINZ, JR., B.S. ..... Physics
CHARLIE CLIFTON MARTIN, M.A. ..... History
WILLIAM DAVID MAXWELL, A.B. ..... Economics and Commerce
JOHN ATTERBURY MONTGOMERY, M.A. ..... Chemistry
ERNEST GIBBES PATTON, B.A. ..... Botany
GEORGE ROWATT PEACOCK, M.A. ..... Political Science
*LEE HARRIS POTTER, B.A. ..... English
CLINTON ROOSEVELT PREWETT, M.A. ..... Education
MARTHA ELLEN QUERY, A.B. ..... Psychology
BLACKWELL PIERCE ROBINSON, M.A. ..... History
*ROBERT PRESTON ROGERS, M.A. ..... English
ELIZABETH SHREVE RYAN, M.A. ..... History
PRISCILLA WARREN SUTHERLAND, M.A. ..... Classics
†WILLIAM OWEN SHEPARD SUTHERLAND, JR., A.M. ..... English
LOUIS FOSTER THEILING, JR., B.S. ..... Chemistry
BETTY SUE TILLEY, A.B. ..... Romance Languages
EVERETT PALMER TRUEX, M.A. ..... Economics and Commerce
BERNICE HEARD WADDELL, A.B. ..... Romance Languages
JAMES HATTON WAHAB, B.S. ..... Mathematics
THEODORE WILLIAM WIRTHS, M.A. ..... Sociology

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*Fall quarter.
†Winter and spring quarters.

## Graduate Assistants

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|---|---|
| HARRY BENNETT ADAMS, B.A. | Physical Education |
| HORACE ADAMS, JR., B.S. | Chemistry |
| JOHN WINFRID AGER, B.A. | Chemistry |
| WARREN EDWIN BAECHT, B.S. | Chemistry |
| ROY HORTON BAILEY, JR., B.S. | Chemistry |
| ANN RUTH BEASLEY, B.S. | Bacteriology |
| EDMUND BERKELEY, M.S. | Botany |
| EDWARD BERNASEK, B.S. | Chemistry |
| ANN JONES BOLLER, B.A. | Public Health |
| JACQUELEENE BOWEN, B.S. | Chemistry |
| ARTHUR LESLIE BRIDGMAN, B.A. | Chemistry |
| ROBERT BLACK BRUCE, B.S. | Biological Chemistry |
| JAMES HAMIEL BRUMBAUGH, B.S. | Chemistry |
| FAIRIE LYN CARTER, B.S. | Chemistry |
| FRANCIS MICHAEL CASEY, A.B. | Dramatic Art |
| PAUL HUBERT CHEEK, B.S. | Chemistry |
| EDITH T. CHEN, M.A. | Psychology |
| SCOTT JULIUS CHILDRESS, B.S. | Chemistry |
| WILLIAM WESLEY COLLINS, B.S.M. | Music |
| *SARAH WINFRED COMPTON, B.S. | Botany |
| RICHARD GARNER COX, A.B. | Music |
| †ROBERT VINCENT COX, B.A. | Physical Education |
| CRAYTON MCCANTS CRAWFORD, B.S. | Chemistry |
| FRETWELL GOER CRIDER, B.S. | Chemistry |
| SUZANNE MARDEN DAVIS, A.B. | Dramatic Art |
| *WILLIAM HUGHES DAVIS, M.A. | Physical Education |
| JAMES TALMAGE DOBBINS, JR., B.S. | Chemistry |
| *KATHARINE SHIPMAN DURHAM, A.B. | Physical Education |
| ROY JACKSON FAHL, JR., B.S. | Chemistry |
| PHILIP REX FERGUSON, M.S. | Chemistry |
| JOSEPH BURTON FINLAY, A.B. | Chemistry |
| *THOMAS CECIL FRAZIER, JR., A.B. | Chemistry |
| EFRIM FRUCHTMAN, B.S. | Music |
| JOHN WARREN GEORGE, A.B. | Chemistry |
| PETER HARRY GERNS, A.B. | Geology and Geography |
| SUDHISH GOVIND GHURYE, M.S. | Mathematical Statistics |
| WINFORD LAMAR GODWIN, A.B. | Sociology |
| ROBERT LOUIS GOLBY, A.B. | Biological Chemistry |

*Fall quarter.
†Fall and winter quarters.

*EDWIN GOLIN, M.A. ..... Psychology
*AUGUSTUS WASHINGTON GRAHAM III, S.B. ..... Chemistry
JESSE KILMORE GREENBAUM, M.A. ..... Physical Education
MARTHA ZANT HARDY, B.A. ..... Dramatic Art
LOIS THELMA HARRIS, B.A. ..... Zoology
DONALD CLARENCE HARTIG, A.B. ..... Physical Education
HOMER ARTHUR HARTUNG, B.A. ..... Chemistry
JOHN BRACKENBOROUGH HARVIE, JR., B.S. ..... Chemistry
†JOHN WILLIAM HEAD, B.S. ..... Chemistry
HUBERT PLATT HENDERSON, A.B. ..... Music
CHARLES LEROY HENRY, M.S. ..... Chemistry
ROSEMARY HENDERSON HERMAN, A.B. ..... Romance Languages
VIRGINIA TOWNSEND HERRIN, M.S. ..... English
JESSE HARRISON HOBBS, A.B. ..... Botany
GEORGE WASHINGTON HOLMES III, M.A. ..... Education
GERALD LEON HONAKER, A.B. ..... Dramatic Art
ALMONTE CHARLES HOWELL, JR., A.B. ..... Music
WILLIAM STRONG HUMMERS, JR., B.S. ..... Chemistry
†FRANKLIN WARD JAMES, B.S. ..... Chemistry
WILLIAM LEROY JEFFORDS, B.A. ..... Physical Education
DANIEL EDDINS KIRK, B.S. ..... Botany
DAVID LANDY, A.B. ..... Sociology
EDWARD CHARLES LEONARD, JR., B.S. ..... Chemistry
VIRGINIA ANNE LYNCH, A.B. ..... Music
ELIZABETH ALICE MCCHESNEY, B.S. ..... Botany
MARY THOMPSON MCCORMIC, A.B. ..... Physical Education
GEORGE WILLIAM MCKINNEY, B.A. ..... Dramatic Art
JAMES EDWARD MALONEY, JR., B.S. ..... Geology and Geography
VIRGIE LILLIAN MATSON, A.B. ..... English
RICHARD DALE MAXWELL, B.S. ..... Physical Education
WILLIAM THURBON MEADE, B.S. ..... Physical Education
JANE WINIFRED MELDRIM, B.A. ..... Psychology
JACK ROBERT MELTON, M.A. ..... Education
ROBERT MOORE MITTEN, A.B. ..... Physical Education
ANNA LYDIA MOTTO, M.A. ..... Classics
FRANK WHITT NELSON, A.B. ..... Physical Education
THOMAS JACKSON NICHOLS, B.M. ..... Music
‡JOYCE LORRAINE NORTON, A.B. ..... Physical Education

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*Spring quarter.
†Fall quarter.
‡Winter and spring quarters.

*Daniel Nyimicz, A.B. ..... Physical Education
Rex Alan Paramore, B.S. ..... Pharmacy
Mary Jo Parrish, B.S. ..... Botany
Stanley Hancock Patten, B.S. ..... Chemistry
Harry Miles Peek, B.S. ..... Geology and Geography
Carl David Perry, A.B. ..... Music
Maurice Cary Powers, A.B. ..... Geology and Geography
†Mildred Connor Read, A.B. ..... Botany
John Herman Recknagel, Jr., B.S. ..... Geology and Geography
Marion Claude Riser, Jr., M.P.H. ..... Education
William F. Rothwell, B.S. ..... Geology and Geography
Norma Sue Sligh, A.B. ..... Zoology
Sally Southerland, B.A. ..... Physical Education
Ernest Marshall Smith, A.B. ..... Geology and Geography
William Kenneth Stars, B.A. ..... Art
Margaret McBride Stewart, B.A. ..... Zoology
*Richard Bernard Stolack, M.S.P.H. ..... Zoology
‡Ervin John Straub, B.S. ..... Physical Education
Mark Reese Sumner, A.B. ..... Dramatic Art
Harry Eugene Varney, B.S. ..... Physical Education
Cordelia Anne Vinson, A.B. ..... Zoology
Virgil Scott Ward, M.A. ..... Education
Nathaniel Stell White, Jr., B.A. ..... Dramatic Art
Lillian Margot Youngs, A.B. ..... Zoology
James Locke Yount, A.B. ..... Zoology
†Lavinia Carothers Yount, B.A. ..... Zoology

## Research Assistants

Mary Swingle Albert, A.B., Institute for Research in Social Science
‡Mary Edna Anders, A.B., Institute for Research in Social Science
Calvin Benham Baldwin, Jr., A.B., Institute for Research in Social Science
Alvin Boskoff, M.A., Institute for Research in Social Science
†John Edwards Bryan, Jr., A.B., Institute for Research in Social Science
Alfred Maxey Denton, Jr., B.S., Institute for Research in Social Science
Edgar Howard Elam, Jr., B.A. Institute for Research in Social Science

*Winter and spring quarters.
†Fall quarter.
‡Spring quarter.

JOHN KENNETH FOLGER, A.B., Institute for Research in Social Science
JOHN CHARLES GOULD, A.B., Institute for Research in Social Science
CHARLES MEADE GRIGG, B.S., Institute for Research in Social Science
JAMES THOMAS HALL, A.B., United States Public Health Service Research Assistant in Physiology
WILLIAM KELVEY HUBBEL, A.B., Institute for Research in Social Science
FLOYD GIBSON HUNTER, M.A., Institute for Research in Social Science
GOPINATH B. KALLIANPUR, M.A., Naval Research Assistant in Mathematical Statistics
ELIZABETH ROSE KRAMM, A.B., Institute for Research in Social Science
SIDNEY LESTER, M.A., Institute for Research in Social Science
RAYMOND WRIGHT MACK, A.B., Institute for Research in Social Science
*HUBERT RAY MARSHALL, A.B., Institute for Research in Social Science
JOHN JOEL MOSS, M.S., Institute for Research in Social Science
†EMMETT JEFFERSON MURPHY, M.A., Institute for Research in Social Science
WALTER MURRAY NORTH, M.A., Institute for Research in Social Science
‡WALTER EDWARD ORGANIST, M.S., Institute for Research in Social Science
§DAVID JOSHUA PITTMAN, A.B., Institute for Research in Social Science
EDWIN HOFFMAN RHYNE, B.S., Institute for Research in Social Science
‡JOHN GILBERT SCOTT, B.S., Institute for Research in Social Science
EDWARD MARVIN STEEL, JR., A.B., Institute for Research in Social Science
†MARJORIE LEE TALLANT, A.B., Institute for Research in Social Science
GEORGE BROWN TINDALL, M.A., Institute for Research in Social Science
BETTIE WEARY III, M.A., Institute for Research in Social Science
JAMES WOOD WILSON, S.M., Institute for Research in Social Science
CLAUDINE GIBSON WIRTHS, M.S., Institute for Research in Social Science
WILLIAM WOODHULL WOOD, JR., B.S., Institute for Research in Social Science

**Research Fellows**

GERHARD MAX BRAUER, M.A., Naval Research Fellow in Chemistry
WILLIAM MONROE GEER, M.A., Institute for Research in Social Science

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*Fall and winter quarters.
†Winter and spring quarters.
‡Spring quarter.
§Fall quarter.

RAYMOND FRANCIS GOULD, M.S., Institute for Research in Social Science

WILLIAM KNIGHT MILLER, A.B., Tennessee Eastman Fellow in Chemistry

INGRAM OLKIN, M.A., General Education Board Fellow in Mathematical Statistics

JOAN ELIOT RAUP, B.A., General Education Board Fellow in Mathematical Statistics

OTIS LESTER SHEALEY, A.B., DuPont Fellow in Chemistry

GEORGE LEE SIMPSON, JR., A.M., Institute for Research in Social Science

NEWTON ROSSER SMITH, B.S., Naval Research Fellow in Chemistry

CLAUDE EDWARD TEAGUE, JR., A.B., Naval Research Fellow in Chemistry

**Non-Service Fellows**

YEN-TASI CHANG, Diploma in Pharmacy, American Foundation for Pharmaceutical Education Fellow

*CLARE MARDEN COTTEN, JR., B.S., Mary Taylor Williams Fellow in Philosophy

ALVIN LEROY DUCKETT, M.A., Waddell Memorial Fellow in History

NANCY BEAM FUNDERBURK, A.B., Consolidated University Fellow

WILLIAM VAN GRIMES, JR., B.A., Bertha Colton Williams Fellow in Philosophy

DORIS BULLARD HAWKINS, S.M., North Carolina Pharmaceutical Research Foundation Fellow

CHARLES ALFRED HOWE, A.M., Merrell Fellow in Chemistry

ALBERT WILLOUGHBY JOWDY, JR., S.M., North Carolina Pharmaceutical Research Foundation Fellow

GEORGE KRZYWICKI, Ph.D., Bertha Colton Williams Fellow in Philosophy

JOHN WALTER MARTIN, JR., B.S., American Foundation for Pharmaceutical Education Fellow

HOWARD WISE RUSSELL, B.A., Graham Kenan Fellow in Philosophy

CHARLES GRIER SELLERS, JR., S.B., Waddell Memorial Fellow in History

WILLIAM JOHNSON SHEFFIELD, S.M., North Carolina Pharmaceutical Research Foundation Fellow

WILLIAM WEST TAYLOR, B.S., North Carolina Pharmaceutical Research Foundation Fellow

WILLIAM GIPSY TOLAND, M.A., Graham Kenan Fellow in Philosophy

*Fall and winter quarters.

JOHANNES WITT-HANSEN, MAGISTER, Mary Taylor Williams in Philosophy

JAMES GEORGE YOUNG, B.S., American Foundation for Pharmaceutical Education Fellow

**Scholars**

JOHN MCTEER BRIGGS, B.A., Service Scholar in Economics and Commerce

*EDWARD ALBERT BRYANT, A.B., University Scholar in Art

ELIZABETH RUSH BUELL, B.A., Service Scholar in the Institute for Research in Social Science

†WILLIAM STOKES CONNOR, A.M., University Scholar in Mathematical Statistics

*GENEVIEVE JEANNETTE FAUCHER, M.A., University Scholar in French

IRVING GURALNICK, B.A., Service Scholar in the Institute for Research in Social Science

JAMES DWYER MCLEOD, M.A., Service Scholar in the Institute for Research in Social Science

LAURA HEARN MARCUS, A.B., University Scholar in Sociology

HANS SCHMIDT, JR., B.S., Service Scholar in Psychology

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## STANDING COMMITTEES OF THE FACULTY

ADVISORY *(elected with terms expiring the year indicated).* 1950: Berryhill, A. W. Hobbs, Wolf; 1951: Baity, ‡Blackwell, §Fesler, Wells; 1952: Couch, Phillips, Woosley.

ATHLETICS. Messrs. A. W. Hobbs, *Chairman,* Cornwell, Hanft, Hedgpeth, J. B. Linker, Sitterson, Wolf.

BUILDINGS AND GROUNDS. Messrs. R. J. M. Hobbs, *Chairman,* Baity, Cornwell, MacNider, J. A. Parker, Teague, Totten, Wager.

CATALOGUE. Messrs. Armstrong, *Chairman,* M. A. Hill, Jr., Howell, King, Phillips, Miss Foster, Miss Norman.

COMMITTEES. Messrs. Howell, *Chairman,* D. D. Carroll, King, Spruill, Wells.

ELIGIBILITY FOR STUDENT ACTIVITIES. Messrs. §Fred Weaver, *Chairman,* Giduz, Sharpe, Spearman, Miss Carmichael.

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*Winter and spring quarters.
†Spring quarter.
‡One-year term, 1949-1950.
§Absent on leave, 1949-1950.

ENDOWED SCHOLARSHIPS, LOAN FUNDS, AND SELF-HELP WORK. Messrs. D. D. Carroll, *Chairman,* Cecil Johnson, *Vice-Chairman,* Armstrong, Cornwell, Friday, M. A. Hill, Jr., S. B. Knight, Lanier, Mackie, Plemmons, J. M. Saunders, Spruill, Teague, Wells, J. A. Williams.

ENGLISH COMPOSITION. Messrs. Totten, *Chairman,* Horner, *Secretary,* Brecht, S. A. Emery, Epps, Friederich, Gwynn, Hardré, G. B. Johnson, Layman, Lehman, McKnight, Mouzon, Newman, Pegg, Robson, Roe, Sanders, Sechriest, Selden, W. A. White.

ESTABLISHED LECTURES. Messrs. Blackwell, *Chairman,* S. T. Emory, Epps, George, Hanft, Heath, Jente, MacNider, Nash.

EXAMINATIONS AND RECORDS. Messrs. Stoudemire, *Chairman,* Armstrong, D. D. Carroll, M. A. Hill, Jr., A. W. Hobbs, Hudson, *Jacobs, Jordan, Lanier, Lasley, Markham, Perry, Suskin.

EXECUTIVE *(elected with terms expiring the year indicated).* 1950: †C. C. Carter, ‡C. S. Jones, H. K. Russell; 1951: Engstrom, Sitterson; 1952: Bailey, Spearman.

FRATERNITIES AND SORORITIES. Messrs. E. E. Peacock, *Chairman,* Gillin, Godfrey, MacKinney, O'Neil, J. M. Saunders, Shotts, Woodhouse, Misses Carmichael, Herring.

GENERAL COLLEGE INSTRUCTION. Messrs. Hudson, *Chairman,* Engstrom, S. B. Knight, Pegg, F. C. Shepard.

HONORARY DEGREES *(elected with terms expiring the year indicated).* 1950: E. W. Knight, Vance; 1951: Couch, Lefler; 1952: Leavitt, Odum.

INSTRUCTION AND REGULATIONS. Messrs. Wells, *Chairman,* Brandis, D. D. Carroll, *Jacobs, King, Lasley, Miller, Newsome, Phillips, Pierson, Spruill, Ullman, Miss Akers.

LIBRARY PLANNING. Messrs. Rush, *Chairman,* Bond, R. E. Coker, Wettach, L. R. Wilson, Woosley.

PUBLIC OCCASIONS. Messrs. J. M. Saunders, *Chairman,* Coates, Fetzer, Grumman, J. C. Lyons, Madry, Phillips, Shotts, Teague, and others as needed.

REGISTRATION. Messrs. Lanier, *Chairman,* Armstrong, Engstrom, Fussler, Hedgpeth, M. A. Hill, Jr., Horner, Ingram, Jamerson, Lasley, Markham, Pegg, and the academic deans.

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*Deceased, March 19, 1950.
†One-year term, 1949-1950.
‡Resigned, November 1, 1949.

REGULATION OF STUDENT DANCES. Messrs. E. M. Allen, *Chairman,* Cornwell, Cotten, Markham, Stanback, Miss Carmichael.

RETIREMENT ALLOWANCES. Messrs. Jente, *Chairman,* Cowden, Fesler, Green, McGill, MacMillan.

RETIREMENT ENDOWMENT. Messrs. L. R. Wilson, *Chairman,* Blackwell, Dashiell, Dey, C. S. Jones, C. P. Lyons, MacNider, H. K. Russell.

SCHEDULE COMMITTEE. Messrs. Wells, *Chairman,* Armstrong, D. D. Carroll, *Jacobs, A. K. King, Lanier, Phillips, Spruill, Weaver, representative from Student Government.

SULLIVAN AWARD. Messrs. Mackie, *Chairman,* Cornwell, Suskin, Miss Carmichael.

UNIVERSITY GOVERNMENT. Messrs. Van Hecke, *Chairman,* Godfrey, A. K. King, E. W. Knight, O'Neil, Wettach, Whyburn.

WAR CREDITS FOR VETERANS. Messrs. D. D. Carroll, *Chairman,* Plemmons, Spruill, Wells.

*Deceased, March 19, 1950.

*Part Two*

# GENERAL INFORMATION

# THE UNIVERSITY

## Historical Sketch of the University of North Carolina

The University of North Carolina, conceived in 1776, chartered in 1789, the cornerstone of its first building laid in 1793, opened its doors to students in 1795—the first state university in the United States.

The origin of the University may be traced to Section XLI of the North Carolina Constitution of 1776, which declared that "all useful learning shall be duly encouraged and promoted in one or more universities." Sponsored by William Richardson Davie, "father of the University," the University was chartered by the General Assembly through an act passed December 11, 1789, which declared that "in all well regulated Governments, it is the indispensable duty of every Legislature to consult the Happiness of a rising Generation, and endeavor to fit them for an honorable Discharge of the Social Duties of Life, by paying the strictest attention to their Education." On December 21, 1789, the General Assembly passed an accompanying act providing for the erection of buildings and for the support of the University through escheats and arrearages due the state.

A special meeting of the Board of Trustees was held at Fayetteville on December 18, 1789, to accept Benjamin Smith's offer of 20,000 acres of land. The first regular meeting of the trustees occurred at Fayetteville on November 15, 1790, as required by the charter. In 1792, a committee headed by Frederick Hargett selected New Hope Chapel, now Chapel Hill, as the site for the University. On October 12, 1793, Davie, as Grand Master of Masons, laid the cornerstone of Old East, the first building. Formal opening exercises were held January 15, 1795, but the first student did not arrive "on the hill" until February 12. For two weeks he was the student body. At the end of the term there were two professors and forty-one students.

The University began its career with a gift of land warrants for 20,000 acres, cash amounting to $2,706.41, and a loan of $10,000 (afterwards converted into a gift) made by the legislature in 1791 as a result of the interest and leadership of Davie as a member of the House. By constant struggle and periodic appeals for private benefactions, the institution grew despite general poverty, opposition to taxation, denominational hostility, and sectional controversies between eastern and western North Carolina. The General Assembly made no specific appropriations for its maintenance until 1881, but

through the act passed in 1789 it exempted the University from taxation and made it the beneficiary of escheats and arrearages due the state; and in 1867 it appropriated $7,000 to pay to officers indebtedness incurred during and immediately after the Civil War.

Before 1804, the University was under a succession of "presiding professors." This was not a satisfactory system, and in 1804, Joseph Caldwell was elected the first president. Under Caldwell (1804-1812, 1817-1835), the University grew from a small classical school into a creditable liberal arts college. After 1815, natural sciences were placed on terms of equality with the humanities.

When Caldwell was succeeded by David L. Swain in 1835, the University was widely known as a center of sound scholarship and teaching. During his long tenure (1835-1868), Swain devoted his administration to a program of drawing the institution and the state close together. More emphasis was placed on subjects designed to prepare men for public service—history, law, rhetoric, and public speaking. The ideal of public service overshadowed general culture prior to 1860. During these years, the enrollment of the University reached a peak of 456 (1858), and its alumni included one president of the United States, one vice-president, seven cabinet officials, ten United States senators, forty-one representatives in Congress, fifteen state governors, and many state judges and legislators. From 1814, when a University alumnus first became governor, until the present time, twenty-six of the forty-four governors of North Carolina have studied at Chapel Hill.

The University remained open during the Civil War, although most of its faculty and students joined the Confederate armies. Reconstruction, however, closed its doors for five years (1870-1875). Through the efforts of the alumni and Mrs. Cornelia Phillips Spencer, a Chapel Hill resident, the University was reopened in 1875.

By the constitution adopted in 1868 the General Assembly has "power to provide for the election of Trustees of the University of North Carolina, in whom, when chosen, shall be vested all the privileges, rights, franchises and endowments thereof in anywise granted to or conferred upon the trustees of said University; and the General Assembly may make such provisions, laws and regulations, from time to time, as may be necessary and expedient for the maintenance and management of said University." The governor of the state is, ex officio, president of the Board of Trustees.

The same constitution, in connection with "Benefits of the University," further states: "The General Assembly shall provide that

the benefits of the University, as far as practicable, be extended to the youth of the State free of expense for tuition; also, that all the property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estates of deceased persons, shall be appropriated to the use of the University."

From its reopening to 1949, the University has had seven presidents, each of whom made a distinct contribution to its expansion and progress. Dr. Kemp Plummer Battle (president 1876-1891) reorganized the University in 1875, established the first summer normal session in the South (1877), secured the first regular appropriation for maintenance (1881), and wrote a two-volume history of the University. George Tayloe Winston (1891-1896) "made its campus the dwelling place of dynamic democracy and a citadel against the forces of intolerance and bigotry." Edwin Anderson Alderman (1896-1900) opened its doors to women. During the administration of Francis Preston Venable (1900-1914), the University's financial condition improved, the physical plant was considerably expanded, athletics were encouraged, and creative scholarship was required of the faculty. The brief administration of Edward Kidder Graham (1914-1918) was notable for the enlargement of the University's service to the state at large, increased resources for administrative and building purposes, and a strengthening of student morale and honor standards. President Harry Woodburn Chase (1919-1930) guided the University through a period of rapid physical expansion, and during this time the University achieved an international reputation for high standards of scholarship and freedom in research and teaching. Student enrollment increased rapidly, and maintenance appropriations reached $894,379 in 1928-1929, the high point up until that time. Increasing emphasis was shown in the social sciences and graduate work. The Graduate School was reorganized in 1920, the University of North Carolina Press was incorporated in 1922, and the Institute for Research in Social Science was organized in 1924. Professional schools of law, medicine, pharmacy, engineering, education, and commerce attained a standing which gave the University its widening reputation.

Under President Frank Porter Graham (1930-1949) the University continued to make progress. The administrative consolidation of the University, the North Carolina College for Women at Greensboro, and the North Carolina State College of Agriculture and Engineering at Raleigh into the University of North Carolina was

effected in 1932. New schools and divisions were added at Chapel Hill—Library Science in 1931, the General College in 1935, and Public Health in 1936. The Institute of Government became a part of the University in 1942, and the School of Education, discontinued in 1933 was re-instituted in 1948. The $3,000,000 Morehead Building and Planetarium was completed in 1949, and a Department of Astronomy was added in the winter quarter, 1950.

In the development of the consolidation process, Robert Burton House was selected by President Graham and duly confirmed by the Trustees in 1934 to serve as Dean of Administration of the University at Chapel Hill. In 1945, Dean House's title was changed by the Trustees to Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina.

In World War II the service of the University and its alumni is particularly noteworthy. More than 10,000 students and alumni, not including Navy and Army personnel sent to Chapel Hill for training, entered the armed forces. More than 300 lost their lives in service. Some 20,000 officers and cadets in naval aviation were trained in the U. S. Navy Pre-Flight School, established in 1942. A naval ROTC unit, which was established in 1940 and still continues, was the core of the Navy's V-12 program at the University. Army and Army Air Corps groups were trained on the campus. Many members of the faculty were given leaves of absence for war service, and a number of University departments were engaged in research programs for the armed forces, for government, and for industry. Throughout the war period the University maintained also its normal curriculum offerings.

On March 22, 1949, Governor W. Kerr Scott appointed President Graham to the Senate of the United States. Pending the election of a new president, Controller W. D. Carmichael, Jr., has been designated Acting President.

Growth of the University at Chapel Hill is depicted in enrollment figures. In the fall of 1920 students in residence numbered some 1,300; in 1930, 2,700; and in the fall of 1941 enrollment reached 4,108 —up to then an all-time high. Because of the G. I. Bill and the general pressure for university and college education since the conclusion of the war, enrollment at Chapel Hill has rapidly increased and in 1948-1949 reached 7,603, the highest figure to date. The evidence indicates continued increased enrollment as facilities are provided.

The physical plant of the University is valued at approximately $20,000,000. In the past thirty years there have been three notable

periods of expansion. The first occurred in the 1920's, the second in the late 1930's and early 1940's, and the third during World War II, when the University expanded its facilities to accommodate Navy and Army training programs on the campus. The 1947 legislature projected a fourth period of building activity when it made appropriations of $7,844,800 for permanent improvements with which to expand the two-year Medical School at Chapel Hill to a four-year school with a teaching hospital, build three new dormitories, greatly increase the capacity of the library, and expand the University's utilities and service plants. Also appropriations have been made for the building of a new wing for Public Health and new quarters for Commerce, Law, and Chemistry; and for the establishment of a Dental School and a Nursing School.

The University has already embarked upon a new era of service to the state. With a bright past and the opportunities for an even more brilliant future, the University of North Carolina looks ahead with confidence and challenge.*

## Organization and Degrees

The University is organized into a General College (which gives the general academic work of the first two years), a College of Arts and Sciences, and seven schools which have jurisdiction over degrees as shown below:

THE COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts
Bachelor of Arts in Journalism
Bachelor of Science in Chemistry
Bachelor of Science in Geology
Bachelor of Science in Physics
Bachelor of Science in Medical Technology
Bachelor of Science in Public Health Nursing
Bachelor of Science in Public Health
Bachelor of Science in Bacteriology
Bachelor of Science in Industrial Relations
Bachelor of Science in Mathematics
Bachelor of Science in Dentistry
Bachelor of Arts and Laws (with the School of Law)
Bachelor of Science in Medicine (with the School of Medicine)
Bachelor of Music

*For more detailed information concerning the University, see Kemp Plummer Battle's two-volume *History of the University of North Carolina*, published 1907-12; and Archibald Henderson's *The Campus of the First State University*, published 1949.

THE SCHOOL OF COMMERCE

Bachelor of Science in Commerce
Bachelor of Science in Commerce and Laws (with the School of Law)

THE SCHOOL OF EDUCATION

Consult material on Education for degrees.

THE GRADUATE SCHOOL

Master of Arts
Master of Arts in Education
Master of Arts in Creative Art
Master of Science
Master of Science in Industrial Relations
Master of Science in Personnel Administration
Master of Science in Public Health
Master of Science in Sanitary Engineering
Master of Science in Social Work
Master of Music
Master of Public Health
Master of Regional Planning
Master of School Librarianship
Doctor of Public Health
Doctor of Philosophy

THE SCHOOL OF LAW

Bachelor of Laws
Doctor of Laws
Bachelor of Arts and Laws (see above)
Bachelor of Science in Commerce and Laws (see above)

THE SCHOOL OF MEDICINE

Bachelor of Science in Medicine (see above)

THE SCHOOL OF PHARMACY

Bachelor of Science in Pharmacy

THE SCHOOL OF LIBRARY SCIENCE

Bachelor of Science in Library Science

SUMMER SESSION

In the Summer Sessions are offered many courses for which regular University credit is allowed, including special courses designed primarily for the teachers of the state. Practically all the work offered is of collegiate grade and may be counted toward some degree from the University.

## Department of Naval Science

A Naval Reserve Officers' Training Corps Unit is maintained at the University of North Carolina under the provisions of Public Law No. 729, which authorizes such units at fifty-two colleges and universities throughout the United States.

For detailed information with respect to the Naval Reserve Officers' Training Corps Unit the reader is referred to Part IV of this catalogue, pages 299-301.

## Department of Air Science and Tactics

With the cooperation of the War Department and the United States Air Forces a course in Air Science has been established at the University. Under this program students may enroll in the Air Reserve Officers Training Corps for a four-year course of formal instruction in Air Science and Tactics.

For detailed information with respect to the Air Reserve Officers Training Corps Unit the reader is referred to Part IV of this catalogue, pages 194-98.

## Admission to Undergraduate Divisions

Undergraduate students may be admitted to the General College, to the School of Pharmacy, to the College of Arts and Sciences, to the School of Education, and to the School of Commerce of the University. Application blanks for admission may be secured by writing the Director of Admissions. Applications with complete records should be submitted at least fifteen days before the opening of the term in which a student desires to enroll.

WOMEN STUDENTS: Women students are eligible to enter the School of Pharmacy, the College of Arts and Sciences, the School of Education, and the School of Commerce on the same basis as men. Only those women who are permanent and bona fide residents of Chapel Hill or who are wives of veterans enrolled in the University are eligible for admission to the General College.

AGE: All applicants must be sixteen years of age before or by the actual date of their first registration.

CHARACTER: All applicants are required to furnish satisfactory evidence of good character.

HEALTH: All registrants are required to have a physical examination by the University Physician immediately before the period of their first registration. Those who are unable to furnish evidence that they have been successfully vaccinated against smallpox will be vaccinated here. It is to the registrant's advantage to have this detail attended to before presenting himself for registration.

EMERGENCY PRIORITY SCHEDULE: At the present time, because of crowded conditions, the Board of Trustees has ordered that admission preference be given (1) to the student presently enrolled, (2) to the old student returning, and (3) to the new student. Each of the three groups is further divided into North Carolina veterans, North Carolina non-veterans, out-of-state veterans, and out-of-state non-veterans, in that order. For 1949-1950, of the total number of new students admitted at any term, only 15 per cent may be from outside of North Carolina. Not subject to the 15 per cent quota are students in the graduate and professional schools and students born in North Carolina or with one parent born in North Carolina.

### ADMISSION TO FRESHMAN STANDING

Formal application for admission to freshman standing in the General College or in the School of Pharmacy (for specific requirements of the School of Pharmacy see the Pharmacy Catalogue) may be made by a certificate showing graduation or its equivalent from an accredited high school with fifteen acceptable units and a statement that the applicant has attained the certifying average of the school last attended. Fifteen units are required. Of these, eleven must be in academic subjects and must include four in English, two in one foreign language, one and one-half in algebra, one in plane geometry, one in a social science (preferably History of the United States), and one in a natural science. The remaining four are elective. Not more than four units in vocational subjects may be allowed toward admission. Specific foreign language requirements will be found in the curricula outlined on pages 127-32. A student may be admitted with a deficiency of one-half unit in algebra, one unit in plane geometry, and two units in foreign language, if he presents fifteen other acceptable units.

REMOVING DEFICIENCIES: The algebra deficiency may be removed by passing Mathematics R or 7 here or by special examination given by the Department of Mathematics. A deficiency in plane geometry may be removed by a special examination given by the Department of Mathematics, or by summer work at an approved high school. A deficiency in a foreign language may be removed by passing the elementary part of the language here. It is very desirable that applicants with deficiencies seek to clear these during the summer immediately preceding the fall opening at which they expect to matriculate. *All entrance deficiencies must be removed before registration for the fourth quarter in residence, not counting the summer quarter.*

A graduate of a non-accredited high school or mature student who cannot meet the formal requirements may qualify for admission by special entrance examination.

The right is reserved to reject the application of any applicant who ranked in the lower half of his graduation class in high school. For cause the Committee on Admissions may disapprove any application for admission.

ADMISSION OF NON-RESIDENTS: Applicants who are non-residents of North Carolina may be required to supplement their applications and transcripts by a personal interview with a representative of the University, a written examination, and other information requested by the Committee on Admissions. They will be expected to have ranked, academically, in the highest one-fourth of their graduating class.

### SPECIAL STUDENTS

Persons twenty-one years of age or over who cannot meet the requirements for admission as degree candidates, or others desiring to improve themselves professionally, may be admitted as special students, with the approval of the dean of the college concerned, to pursue a non-degree program. Application is made through the Director of Admissions, and satisfactory evidence of the students' ability to profit from the program desired must be furnished. The applicant should have an interview with the dean having supervision over the work to be taken.

Special students are on probation. They are required to pass all of their courses in order to be eligible to continue in the University.

### ADMISSION TO THE COLLEGE OF ARTS AND SCIENCES AND TO THE SCHOOL OF COMMERCE

Admission to the College of Arts and Sciences and to the School of Commerce is based upon the satisfactory completion of the first two years of college work given in the General College of this University (pages 123-32) or its equivalent certified by another institution of recognized academic standing.

Satisfactory completion of the first two years of college work is interpreted to mean that a C average or better is achieved (C on a percentage basis covers the range from 80 per cent to 90 per cent where 70 is the minimum passing grade). Provision may be made for the removal of a deficiency in the exact requirements of the first two years.

### ADMISSION TO ADVANCED STANDING

A person seeking admission to the University on the basis of work at another recognized college or university is required to present a properly certified transcript of his record at that college or university at least fifteen days before the opening of the term in which the applicant desires to enroll. Application blanks may be secured by writing to the Director of Admissions. All transfer students must submit a fee of $5.00. If the applicant is not accepted, the fee is returned; if he is accepted and enrolls as a student, the fee will be applied against the bill at his first registration; if he is accepted but does not enroll, the fee will be forfeited regardless of the reason involved.

Each transferred record will be evaluated in terms of requirements here. A transferring student is expected to present at least a C average on the work taken at other institutions. A course passed with the lowest passing grade at another institution does not give hours credit toward graduation, but may be used to satisfy a subject requirement in the University. No credit is allowed for work done at non-standard or non-accredited colleges and universities unless a substantiating examination is passed here in each subject for which credit is sought. Any record submitted for advanced standing may be rejected in whole or in part, and validating examinations may be required in any or all subjects.

Applicants who have ever attended for any period of time a college or university are required to present properly certified transcripts or records of such attendance. It will be considered a violation of the honor code if any applicant makes a false statement in his application for admission with reference to previous college or university at-

tendance in order to gain admission on the basis of a high school record alone.

The University is not an accrediting agency. It accepts the accreditation of the North Carolina State Department of Education in so far as high and preparatory schools and colleges (junior colleges or four-year institutions) are concerned. Outside of North Carolina the University depends upon the accreditation of the departments of education of the various states, upon the accreditation of the state universities or institutions of comparable rank, and upon the accreditation of regional accrediting agencies.

### ADMISSION TO GRADUATE AND PROFESSIONAL SCHOOLS AND THE SUMMER SCHOOL

For the requirements for admission to the graduate and professional schools, the applicant should address his inquiry to the dean of the school in which he desires to enroll or consult the special catalogue of that school. For admission to the Summer School only, the applicant should write to the Director of the Summer School.

## The College Year

The college year is divided into fall, winter, spring, and summer quarters of approximately twelve weeks each, the summer quarter being divided into two terms of about six weeks each. The School of Law divides its work into two semesters, also conducting a summer session coinciding in extent with one summer term in academic subjects. There is a Christmas recess of approximately two weeks.

## Religious Influence

The deep concern of the University for the religious life of the student is symbolized by the centrally located YMCA and YWCA building. Functioning in the heart of the campus and led by outstanding directors, these Christian Associations minister to a large group of students. In addition to their own programs and services, the YMCA and YWCA serve as channels of communication into the campus for the various denominational groups.

The churches of Chapel Hill, representing most of the denominations, provide an effective ministry to the students in their services of worship and weekly religious programs. The larger denominations also make available, through their state and national boards, the services of young pastors who work exclusively with students. These pastors, having official faculty recognition, work in close cooperation with the campus religious agencies.

The University has recently established a Department of Religion, offering courses in the history, literature, and interpretation of religion. All students thus have the opportunity to study with competent professors who can lead them to a better understanding and appreciation of their religious faith.

The Council on Religious Life, whose chairman is the Chancellor of the University, includes in its membership the deans of the colleges, heads of departments, college pastors, YMCA and YWCA directors, and other key persons on the campus. The Council, divided into four committees, serves to coordinate all religious activities, to provide counseling service for students, to supervise chapel and convocations, and to sponsor new approaches to religious emphasis among the students. The Department of Religion is a direct outgrowth of this Council's study and interest.

## Physical Education

A thorough physical examination is given to students at the time of entrance. All students are classified on the basis of the examination, and an effort is made to adapt the program to the individual's particular needs.

Physical education is required of all undergraduate men three periods each week for the first two years; and of all undergraduate women two periods each week for the first three years. A three-quarter-hour course in hygiene is required of all freshmen. Upperclassmen are offered the opportunity to major in the field of health and physical education.

Encouragement is given to athletic sports and to all kinds of physical activity. The program of intercollegiate athletics includes a great variety of seasonal competitive games, with the idea of promoting maximum participation by members of the student body.

In addition to intercollegiate athletics the University fosters an unusually extensive program of intramural athletics. During the 1949-1950 school year the program involved 65 per cent of the male student body. Every effort is made to provide all interested students with the opportunity to participate in a healthful form of competition with his fellows and to learn teamwork and good sportsmanship.

## Medical Attention

In order to provide proper attention for the student, the University employs five full-time physicians and maintains a well-appointed infirmary, with a modern X-ray unit under the direction of a full-

time technician, and with a laboratory for diagnostic purposes under the direction of two full-time technicians. The infirmary is under the immediate supervision of the University Physician and is provided with ten experienced nurses who are under the general supervision of a head nurse. At the discretion of his attending physician a student may be admitted to its wards, and for such services as may be rendered by the staff no charges are made. But the student will be required to pay for any additional service (consultation, special nurses, and operations), recommended by the attending physician and approved by the parent or guardian.

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## THE DIVISION OF STUDENT WELFARE

The Division of Student Welfare was established to coordinate and promote the work of all University agencies and organizations affecting the welfare of students. Its work is understood to embrace all University relationships with students other than formal instruction. These relationships all have educational significance and are recognized as an integral part of the educational program of the University.

The function of the Welfare Board is twofold: first, that of a coordinating agency for the various officers of instruction and administration whose work directly affects student welfare; second, that of affording regular clearance between these officers of the University and representative student leaders. The first of these functions allows for a strengthened and integrated program of student welfare through bringing to bear upon common problems the concerted judgment and energy of closely related officers in the University. The second meets the need for an agency to hear student grievances and proposals; also, it recognizes the importance of student participation in administrative discussions and decisions affecting student welfare. The Chancellor is a member, ex officio, of this board.

### The Welfare Board

FREDERICK HENRY WEAVER, *Chairman*

LEE ROY WELLS ARMSTRONG
JOHN SAMUEL BENNETT
MISS KATHERINE KENNEDY CARMICHAEL
DUDLEY DEWITT CARROLL
OLIVER KELLY CORNWELL
HARRY WOLVEN CRANE
MISS GAY WILSON CURRIE
ROBERT ALLISON FETZER
WILLIAM CLYDE FRIDAY
JOSEPH MORGAN GALLOWAY
EDWARD MCGOWAN HEDGPETH

RAYMOND LEWIS JEFFERIES, JR.
CECIL JOHNSON
ARNOLD KIMSEY KING
EDWIN SIDNEY LANIER
ERNEST LLOYD MACKIE
MISS ELIZABETH PARKER
WILLIAM DECATUR PERRY
GUY BERRYMAN PHILLIPS
JOSEPH MARYON SAUNDERS
CLAUDE CORNELIUS SHOTTS
WILLIAM MELVIN SHUFORD
CORYDON PERRY SPRUILL, JR.
CLAUDE EDWARD TEAGUE
JAMES EDGAR WADSWORTH
WILLIAM SMITH WELLS

Because of the close relationship of this division to student life, there is an Advisory Committee composed of students appointed annually by the Chancellor of the University on the joint nomination of the President of the Student Body and the Chairman of the Board. The following were appointed for 1949-1950:

**Student Advisory Committee**

HARRY WILLIAM AYCOCK
DANIEL LONG BELL, JR.
ANNE CHANDLER
HELEN PEOPLES EPPES
ROY WALTER HOLSTEN
RICHARD HAMPTON JENRETTE
COLVIN THEODORE LEONARD, JR.
BARBARA MORRIS LOWE
ALLARD KENNETH LOWENSTEIN
WILLIAM ERNEST MACKIE
SAMUEL HAYS MAGILL
RICHARD JAMES MURPHY
ALLISON HODGES PELL, JR.
PATRICIA DENNING STANFORD
NATHANIEL MCDONALD WILLIAMS, JR.

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## STUDENT GOVERNMENT

The student body of the University is self-governing. The functions of this government are both disciplinary and administrative. These functions are exercised by executive, legislative, and judicial branches of representative government under a student constitution.

The executive department consists of the President of the Student Body, assisted by the Vice-President and the Secretary-Treasurer, all elected by the student body at large.

Legislative power is vested in a Student Legislature comprised of fifty members elected annually.

The judiciary comprises the Student Council, the Men's Council, the Women's Council, and special councils for dormitories and fraternities.

### Officers of Student Government

WILLIAM ERNEST MACKIE.....*President of the Student Body*
CALVIN THEODORE LEONARD, JR.....*Vice-President of the Student Body*
NATHANIEL MCDONALD WILLIAMS, JR.
*Secretary-Treasurer of the Student Body*

### Student Council Members

DANIEL LONG BELL, JR., *Chairman*

KATHERINE STEWART ALTIZER, *Clerk*
KYLE DUILAND BARNES
GEORGIA WALLACE FOX
PEGGY LOUISE MARTIN
SARA JANE OSBORNE
DONNELL VAN NOPPEN, JR.
CAMEST LOTORGE WEST
WILLIAM TED YOUNG

### Men's Council Members

ROY WALTER HOLSTEN, *Chairman*

DONALD LEON BENNETT
THOMAS CHATTERTON COXE
CHARLES DONSMORE FOX III
PETER HARRY GERNS, *Clerk*
CLARENCE NEWELL GILBERT
MONROE GARLAND JOHNSON, JR.
BENJAMIN MOSELEY JONES
RICHARD HAYNE PALMER
ROBERT BENJAMIN PAYNE

### Women's Council Members

HELEN PEOPLES EPPES, *Chairman*

ANNE CHANDLER
PATRICIA JESSICA CHANDLER
IMOGENE DENBO, *Clerk*
PATRICIA ANN FRIZZELL
BARBARA JEAN LUNSFORD
BARBARA ANN PAYNE
ANN LEE SAWYER
MARY MCCORMIC

No detailed code of rules is designed to govern student behavior. High standards of morality under the Honor System and of gentlemanly conduct under the Campus Code constitute the core of student responsibility and policy. The student councils, consisting entirely of student members, are the responsible courts in which violators of the Honor System and the Campus Code are tried. If a student is found guilty of violating the Honor System or the Campus Code, he may be suspended from the University for an indefinite period. Indefinite suspension is the established penalty, although there has been some variation in sentences from one student generation to another. Among the offences traditionally requiring suspension are cheating, stealing, lying, drunkenness, and gambling.

## UNIVERSITY ORGANIZATIONS

The organizations listed below offer opportunity for interested students to participate in activities which appeal to them and to become acquainted with others in the University having similar interests. Fuller information about them may be secured from the Dean of Students and the officers of the organizations.

*The Senate of the Dialectic Literary Society and the General Assembly of the Philanthropic Literary Society,* founded in 1795, offer opportunity to participate in debates and discussion and to learn parliamentary procedure.

*The Elisha Mitchell Scientific Society,* an organization of students and faculty members interested in science, holds monthly meetings for the presentation and discussion of papers and maintains a journal which has international circulation.

*The Philological Club,* meeting monthly during the academic year, is constituted in the same way for presentation of papers dealing with languages and literature in all fields. It, too, maintains a journal which is widely circulated.

*Foreign Language Clubs,* including *Le Cercle Français, El Club Español,* and *Delta Phi Alpha* (honorary German fraternity), meet regularly for the purpose of developing facility in understanding and speaking the foreign languages and of discussing topics relating to the life, customs, and literature of the countries where the languages are native.

The *Carolina Political Union,* a group of students and faculty members, holds regular forums for the discussion of current political and economic problems and brings to the campus speakers in national and state political life.

The *International Relations Club,* similarly organized and conducted, concerns itself with international problems and also sponsors addresses by speakers interested in international affairs.

*The Association of Carolina Scientists* performs a similar function in the field of science as it relates to social and economic questions.

*The University Veterans Association,* composed of students and faculty who are veterans of the Second World War, provides an organization for consideration of problems of interest primarily to veterans.

*Musical Organizations* center their activities in Hill Hall, whose auditorium seats eight hundred and contains a four-manual concert organ. Hill Hall houses a collection of records, scores, books on music, and phonographs for audition purposes. Among musical organizations open to students and faculty are:

Glee Clubs for Men and Women
Symphony Orchestra
University Band
Chapel Hill Choral Club
Alpha Rho Chapter of Phi Mu Alpha (Honorary Music Fraternity)
Iota Tau Chapter of Sigma Alpha Iota (Honorary Music Sorority)

*The Carolina Playmakers,* the University dramatic organization, gives ample opportunity to students for the writing, production, and acting of plays, as well as for the design of scenery, stage settings, and lighting effects. It maintains the Playmakers Theatre and the Koch Memorial Forest Theatre.

The *Young Men's Christian Association,* organized at the University in 1859, is a fellowship of Carolina students, faculty, and friends seeking to discover and practice the Christian way of life in all their relationships and activities. The program and service of the Association are developed by its active members on the basis of student needs. Membership is open to all men.

The *Young Women's Christian Association,* similarly, is the religious, social, and welfare agency for women students. Both of these organizations maintain the Y. M. C. A. Building and are adequately staffed with secretaries.

The *Council of Religion* includes in its members the presidents of all student religious organizations on the campus. It is interdenominational and interfaith in character and seeks to coordinate the work of the individual student religious organizations. It also studies the total religious needs of the campus, suggests ways of meeting these needs more adequately, and initiates proposals for strengthening the programs of its member organizations and advancing the religious work of the campus.

## EXPENSES

**The University reserves the right to make, with the approval of the proper authorities, changes in tuition and any other fees at any time.**

### Tuition and Other Fees for Each Quarter

Each student whose bona fide residence has not been established in North Carolina for at least the six months immediately prior to his first registration in the University must pay a higher rate of tuition than that paid by a legal resident of North Carolina. The residence of a minor is that of his parents or guardian. The residence of an adult remains with his parents unless he has independently set up one of his own.

Bona fide residence in North Carolina means that the student is not in the state primarily to attend the University and that his status as a resident has not been set up merely as a technical bar to the higher tuition charge. Mere ownership of property or payment of taxes apart from residence does not qualify one as a resident, nor may a student qualify by living in North Carolina the six months immediately prior to his first registration unless he continues so to live during the whole period of his stay at the University.

Students are presumed to know their correct residence status and to state the facts concerning it truthfully on their application and registration blanks. Students in doubt should state their cases in writing to the Chancellor, preferably in advance of registration. Students who misrepresent the facts of their residence status for the purpose of defrauding the University will be dealt with as are all other violators of the Honor System.

The tuition rates for students registered in the General College, College of Arts and Sciences, School of Education, School of Commerce, and Graduate School are as follows:

| | |
|---|---|
| Residents of North Carolina, each quarter | $ 50.00 |
| Non-residents of North Carolina, each quarter | 120.00 |

In addition to the tuition charge, the fees payable at the beginning of each quarter are as listed below:

| *FEES:* | *General College, Arts & Sciences, and Education* | *Commerce* | *Graduate* |
|---|---|---|---|
| Matriculation | $21.00 | $21.00 | $21.00 |
| Student Activities | 5.00 | 5.00 | 3.85 |
| Materials | | 2.00 | |
| Laundry Deposit | 10.00 | 10.00 | 10.00 |
| Woman's Association | 1.00 | 1.00 | 1.00 |

The matriculation fee covers use of physical education facilities, infirmary, library, cost of registration, and membership in the Athletic Association. The student activities fee covers general campus activities supported by all regular students. The reading and materials fee applies only to students registered in the School of Commerce. Women students pay the Woman's Association fee.

### Laundry Deposit

Students are required to make an initial deposit of $10.00 at the beginning of each quarter to cover laundry service at the University Laundry, and an additional deposit if the first is exhausted. Any amount not used will be refunded at the close of the spring quarter.

### Laboratory Fees

Each student taking a laboratory course must pay, in addition to tuition, a fee to help cover the cost of conducting laboratory experiments. The courses carrying laboratory or materials fees and the amounts are as follows:

| | |
|---|---|
| Anatomy 101, 102, 103, 104, 106 | $ 5.00 |
| Anatomy 107ab | 15.00 |
| Anthropology 41, 74, 122, 126, 127, 128, 130, 220, 229 | 1.00 |
| Anthropology 79 | 3.00 |
| Art 77, 83 | 7.50 |
| Art 93abc | 2.50 each |
| Art 44, 45, 46, 48, 49, 50, 55, 80, 81, 84, 86, 87, 109, 110 | 7.50 |
| Art 54, 82, 85, 108, 111, 112, 113, 122 | 10.00 |
| Art 104, 105, 106 | 15.00 |
| Art 120, 121, 122, 250abc, 252abc, 253abc | 20.00 |
| Astronomy 31, 32 | 3.00 |
| Bacteriology 51 | 4.00 |
| Bacteriology 107, 112 | 6.00 |
| Bacteriology 110 | 7.50 |
| Bacteriology 101, 104, 115, 116, 117 | 10.00 |
| Bacteriology 120, 220 | 12.00 |
| Bacteriology 301, 302, 303 | to be determined |
| Biological Chemistry 101, 102, 103, 201, 202, 203, 301, 302, 303 | 10.00 |
| Botany 1 | 2.00 |
| Botany 41, 43, 102, 103, 104, 111, 112, 113, 141, 151, 153, 154, 155, 157, 158, 166, 176, 211, 212, 213, 251, 252, 253, 301, 302, 303 | 4.00 |
| Botany 42, 45 | 6.00 |
| Botany 121, 122, 221, 222, 223 | 8.00 |
| Botany 145, 147 | 10.00 |
| Chemistry 1, 2, 3, 83 | 3.00 |
| Chemistry 31, 41, 42, 51, 61, 62, 63, 145, 146, 147, 148, 154, 161, 163, 164, 165, 166c, 167c, 168c, 181, 182, 183, 196, 231, 341, 351, 361, 381, 391 | 10.00 |
| Chemistry 101, 267 | to be determined |
| City and Regional Planning 170 | 3.00 |
| Commerce 156, 159, 173, 175, 177, 179, 255, 273, 274 | 3.00 |
| Commerce 71, 72 | 3.00 |

| | |
|---|---|
| Commerce 157 | 6.00 |
| Commerce s178 | 7.50 |
| Composition Condition Laboratory | 5.50 |
| Dramatic Art 40, 55 | 1.50 |
| Dramatic Art 61, 63, 64, 65, 66, 67, 70, 71, 75, 85, 193, 202 | 2.00 |
| Dramatic Art 57, 155, 156, 157, 201 | 3.00 |
| Dramatic Art 85 | 5.00 |
| Dramatic Art 86, 90 | 10.00 |
| Economics 171, 172, 173 | 3.00 |
| Economics 170 | 3.00 |
| Education 71 | 1.00 |
| Education 62, 64, 78, 80, 82, 84a, 84b, 86, 88, 90, 92 | 10.00 |
| Education 76, 79 (per 5 hours) | 10.00 |
| Education 135 | 2.00 |
| English 40, 41, 44, 55, 56 | 1.50 |
| Folklore 128 | 1.00 |
| French 84 | 10.00 |
| Geography 39, 75 | 2.00 |
| Geography 38 | 3.00 |
| Geography 71, 117, 171 | 5.00 |
| Geography 118 | 3.50 |
| Geography 156 | 30.00 |
| Geology 1, 41, 42, 61, 64, 121, 122, 123, 127, 164, 166, 224, 225, 226, 227, 228, 229, 265, 281, 282, 283, 284 | 3.50 |
| Geology 102, 103, 104, 105, 106, 107, 108, 109, 117, 144, 145, 168, 169, 221, 222, 223, 241, 242, 243, 244, 245, 246, 247, 248, 249, 261, 262, 285, 286, 287, 288, 289 | 5.00 |
| Geology 101, 128, 129, 147 | 10.00 |
| German 1x, 2x, 3x | 10.00 |
| History 1, 2, 175 | 1.00 |
| Journalism 53, 54, 55, 59, 62, 63, 72, 73 | 2.00 |
| Journalism 57, 67, 80 | 5.00 |
| Mathematics 41, 42 | 1.00 |
| Mathematics 51, 52, 123 | 4.00 |
| Music 41, 54, 55, 56 | 1.00 |
| Pharmaceutical Chemistry 62, 63 | 10.00 |
| Pharmaceutical Chemistry 64 | 5.00 |
| Pharmaceutical Chemistry 61, 171, 172, 173, 241, 242, 243, 271, 271b, 272b, 273b, 391, 392, 393 | 10.00 |
| Pharmaceutical Chemistry 282 | 1.00 |
| Pharmacognosy 42 | 6.00 |
| Pharmacognosy 45 | 6.00 |
| Advanced Pharmacognosy 142 | 4.00 |
| Advanced Macro-pharmacognosy 145 | 10.00 |
| Advanced Micro-pharmacognosy 147 | 10.00 |
| Research in Materia Medica and Pharmacognosy 391, 392, 393 | 10.00 |
| Pharmacology 55 | 5.00 |
| Pharmacology 161, 162, 301, 302, 303 | 10.00 |
| Pharmacology 171a, 171b, 171c | 15.00 |
| Pharmacy 12, 83 | 5.00 |
| Pharmacy 21, 81, 82, 91, 92, 93 | 7.50 |
| Pharmacy 24, 45, 61, 62, 64, 65, 162, 163, 191, 252, 253 | 10.00 |
| Pharmacy 192, 193, 251, 261, 271, 391, 392, 393 | 10.00 |
| Physical Education 221 | 5.00 |
| Physics 42, 52, 53, 55, 56, 57, 61, 62, 120, 141, 153, 158, 162 | 3.00 |

| | |
|---|---|
| Physics 20, 24, 25, 34, 35 | 4.00 |
| Physics 45, 91, 92 | 5.00 |
| Physics 51 | 15.00 |
| Physiology 51, 301, 302, 303 | 5.00 |
| Physiology 142, 201, 202, 206, 211, 212 | 10.00 |
| Political Science—Courses 41-185 incl., 210-331 incl., and 361 | 1.00 |
| Psychology 122, 133 | 1.00 |
| Psychology 125, 126, 130, 132, 135, 136, 225, 230, 232 | 2.00 |
| Psychology 24, 25, 147, 148, 149, 150, 151, 152, 153, 181, 201, 202, 205, 247, 249, 250, 251, 252, 253 | 3.00 |
| Public Health 121, 122, 123, 135, 281 | 3.00 |
| Public Health 61, 165, 261 | 3.50 |
| Public Health 131, 133, 134, 151, 233, 234, 262, 272, 273, 274 | 4.00 |
| Public Health 162, 163, 164 | 5.00 |
| Public Health 232 | 8.00 |
| Public Health 361, 371, 381 | 10.00 |
| Public Health 332 | 15.00 |
| Radio 70, 71, 72, 73, 75, 81 | 2.00 |
| Radio 42 | 3.00 |
| Radio 85 | 5.00 |
| Radio 86, 90 | 10.00 |
| Social Science 1, 2 | 1.00 |
| Social Work 215, 216, 217, 218, 220, 221 | 25.00 |
| Social Work 219 | 15.00 |
| Sociology 51, 52, 113, 122, 128, 133, 167, 168, 171, 174, 181, 182, 186, 198, 208, 215, 218, 220, 229 | 1.00 |
| Sociology 191, 197, 253 | 2.00 |
| Spanish 84 | 10.00 |
| Zoology 1 | 3.00 |
| Zoology 41, 42, 106, 107, 108, 109, 110, 111, 112, 209, 210, 211, 212, 213, 214, 215, 222 | 7.50 |
| Zoology 316 | 7.50 or more |
| Zoology 330, 331, 332, 333, 334, 335, 336, 337, 338, 339 | (per 5 hours) 7.50 |
| Zoology 104, 105 | 10.00 |
| Zoology 103 | 12.50 |

## Laboratory Breakage Deposits

Students taking certain courses in chemistry, pharmacy, and medicine are required to make a deposit to cover breakage of equipment, use of more than normal expendable supplies and materials, and depreciation on unusual equipment. These deposits range from $7.00 to $15.00. The unused portion of the deposit is refunded at the end of the quarter.

## Application Fee

Each application for admission to advanced standing must be accompanied by a transcript evaluation fee of $5.00. If the applicant is not accepted the fee is returned; if he is accepted and enrolls as a student, the fee will be applied against his bill at his first registration; if he is accepted but chooses not to enroll as a student the fee will be forfeited.

### Charges for Credit Obtained by Examination

Students who take examinations for credit for advanced standing will be charged $1.00 for each quarter hour of credit secured by examination.

### Delayed Registration

Any student registering later than the time appointed for his registration must pay an additional fee of $5.00. No appeal from the late registration charge will be granted, unless the delay is due to circumstances clearly beyond the student's control. Such an appeal must be made in writing to the Chancellor, must show justification for the delay in registering, and must bear the approval of the dean of the division of the University in which the applicant is enrolled.

### Transcripts of Record

One transcript will be furnished without charge. Additional transcripts will be furnished only upon payment of $1.00 for each copy.

### Graduation Fee

The graduation fee is $5.00, payable when application for degree is made. A cap and gown rental fee of $2.50 is made to recipients of bachelors' degrees, $3.75 to recipients of masters' degrees, and $5.00 to recipients of doctors' degrees.

### Refunds

A student withdrawing within the first week of any quarter is charged only a registration fee of $5.00. If he withdraws after the first week, his bill will be prorated on the basis of one-eighth for each week (or part of a week) he attends. No refund will be made after the eighth week of any quarter.

### Payment of Bills

Bills for the fall quarter are payable at the time of registration. Bills for the winter and spring quarters are payable at the Cashier's office on the first class day of the quarter, and thereafter according to a schedule announced. Failure to pay or make the proper arrangements for payment results in the assessment of a extra fee of $5.00.

## ROOM AND BOARD

### Dormitory Accommodations for Men

Accommodations for approximately 3,000 men students are available in the University dormitories. In addition, many students find places for themselves in private homes or fraternity houses.

All rooms in the dormitories are completely furnished. Students will, however, provide their own pillows, bed linen (for single beds), blankets, and towels.

Room rent ranges from $6.00 to $15.00 a month for each occupant, the price depending upon the location of the room. Rooms are leased for the scholastic year. Application for a room should be made to the University Cashier and should be accompanied by a deposit of $6.00.

### Dormitory Accommodations for Women

Seven dormitories provide excellent accommodations for 688 women students. Spencer, Smith, McIver, and Alderman Halls are for undergraduates, while Kenan and Carr Halls are reserved for graduate and professional students.

Women students not living in their own homes are required to reside in a dormitory unless permission to live elsewhere is granted by the Dean of Women. Ordinarily such permission is granted in exceptional cases only.

Application for a room should be made to the Dean of Women, and should be accompanied by a deposit of $6.00.

Rooms are rented upon the basis of the entire scholastic year. Payment is made in three installments, the first of which is due September first. The amount of each installment is determined by the annual rental price of the room and the length of each term.

Residents of Spencer Hall are required to board there. Residents of the women's buildings are given preference for vacancies in Spencer Hall dining room, but are privileged to board at any of the available boarding places.

All rooms are furnished. Students are required to provide, however, pillows, bed linen (for single beds), blankets, and towels.

The cost of room and board and details concerning payments may be found in the Handbook for Women Students or by correspondence with Dr. Katherine K. Carmichael, Dean of Women.

### Boarding Accommodations

The University operates for the benefit of the students the conveniently located Lenoir Hall Cafeteria and the Carolina Inn Cafeteria. Well-balanced menus are offered at standard prices.

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## SUMMARY OF ESTIMATED EXPENSES FOR THE COLLEGE YEAR OF THE AVERAGE MALE STUDENT WHO IS A RESIDENT OF NORTH CAROLINA

| | |
|---|---|
| Board at $45 a month, estimated vacations eliminated | $405.00 |
| Dormitory room, at $8.33 a month | 75.00 |
| *Tuition | 150.00 |
| Matriculation and students' fees, estimated for freshman year | 78.00 |
| Laundry deposit | 30.00 |
| Books and supplies, estimated for year | 25.50 |
| Laboratory fees, estimated for the average freshman | 10.00 |
| TOTAL FOR NORTH CAROLINA RESIDENT | $773.50 |

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## PECUNIARY AID

The income from a number of endowed scholarships is available for students who can show academic attainment along with definite financial need. The University also has certain funds which may be loaned to worthy students who can show definite need. In addition, there are a limited number of positions involving various kinds of work which enable some students to earn a part of their expenses. Information about all these types of assistance may be obtained by writing the Director of Student Aid.

### Fellowships and Scholarships

THE LEDOUX FELLOWSHIP IN CHEMISTRY. (Established in 1911 by Dr. Albert R. Ledoux.) The holder of this fellowship, which provides $300 annually, is expected to devote himself to research in chemistry.

THE GRAHAM KENAN FELLOWSHIP IN PHILOSOPHY. (Established in 1921 by Mrs. Graham Kenan.) This annual fellowship, established in memory of an alumnus and trustee of the University, is supported by the income from an endowment of $25,000.

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*Tuition for out-of-state residents in all schools except Medicine and Public Health is $360.00 a year.

Information concerning tuition for professional schools is available in the catalogues of the Schools of Law, Medicine, Dentistry, Pharmacy, Public Health, and Library Science.

THE ERNEST H. ABERNETHY FELLOWSHIP IN SOUTHERN INDUSTRY. (Established in 1944.) The holder is required to do research in an industry of importance to the South and to prepare a thesis as the result of the study.

THE MOORE SCHOLARSHIPS. (Established in 1881.) Bartholomew Figures Moore, of Raleigh, bequeathed $10,000, the interest of which shall be devoted to paying the tuition of students. In 1940 James Moore, the son of the donor, raised the sum to $15,000.

THE MARY RUFFIN SMITH SCHOLARSHIPS. (Established in 1885.) Miss Mary Ruffin Smith bequeathed to the University in memory of her brother, Dr. Francis Jones Smith, 1,460 acres of land, known as Jones' Grove, in Chatham County. The will provides that rents of the land, or the interest on the purchase money, if sold, shall be used to pay the tuition of such needy students as the faculty shall appoint.

THE MARY ANN SMITH SCHOLARSHIPS. (Established in 1891.) Miss Mary Ann Smith bequeathed $37,000 for the foundation of scholarships, the number of scholarships to be determined by the amount of the income.

THE CAMERON SCHOLARSHIPS. (Established in 1892.) The heirs of Paul Carrington Cameron founded in his memory ten scholarships of the value of $75 each.

THE SPEIGHT SCHOLARSHIPS. (Established in 1892.) The late Mrs. Mary Shepherd Speight bequeathed $10,000 to the University. The income shall be used to pay the tuition of needy students; if tuition is ever made free, the income shall be used toward paying the salaries of professors.

THE WOOD SCHOLARSHIP. (Established in 1892.) Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her late husband, Dr. Thomas Fanning Wood, a scholarship of the value of $75.

THE WEIL SCHOLARSHIP. (Established in 1898.) A fund established by Mr. Henry Weil, of Goldsboro, furnishes one scholarship of the value of $75.

THE ARMFIELD SCHOLARSHIPS. (Established in 1901 and 1904.) These scholarships were founded by the late Mr. Eugene M. Armfield, of High Point, N. C., a member of the Class of 1888.

THE KENNETH MURCHISON SCHOLARSHIPS. (Established in 1904.) These scholarships were founded by Mrs. Shirley Carter, of Baltimore, Md., and the late Mrs. James Sprunt, of Wilmington, N. C., in memory of their father.

THE DONALD FAIRFAX RAY SCHOLARSHIP. (Established in 1919.) Mrs. N. W. Ray, of Fayetteville, N. C., established this scholarship in memory of her son, Donald Fairfax Ray, a graduate of the University, who died while in the service of his country.

THE HOLT SCHOLARSHIPS. (Established in 1920.) Four scholarships are maintained by the income from the Holt Loan Fund, established by Mr. Lawrence S. Holt, Jr. They are awarded to a member of each of the four classes in the Academic Department. Applications are considered after the opening of the University in the fall.

THE ALUMNI SCHOLARSHIPS. These scholarships have been established by the gifts of alumni, and they vary in stipends according to the funds in hand.

THE R. H. LEWIS SCHOLARSHIPS. Four scholarships, endowed by the University Gymnasium Association and called The R. H. Lewis Scholarships, are assigned by the President, and are to be used for tuition in the Academic Department.

THE GEORGE NEWBY TOMS SCHOLARSHIPS. (Established 1926.) Mr. C. W. Toms, in memory of his son, George Newby Toms, has granted the income from a fund of $10,000 as scholarships to worthy students, preference being given to students from Durham and Perquimans counties in North Carolina.

THE MARY K. BROWN MEMORIAL SCHOLARSHIP. This scholarship was established in 1931 by Mrs. James M. Brown in memory of her daughter, who for several years was secretary of the School of Commerce of the University. This scholarship is awarded to a worthy student who is dependent upon his own efforts to secure an education.

THE GENERAL ROBERT RANSOM SCHOLARSHIP. This $200 scholarship, controlled by the United Daughters of the Confederacy in North Carolina, is awarded each year to a lineal descendant of a Confederate veteran.

WILLIAM BLOUNT RODMAN SCHOLARSHIPS. Two scholarships assigned to students at the University from the memorial trust fund created by Colonel W. B. Rodman in memory of his father, William

Blount Rodman. They are assigned by the State Superintendent of Public Instruction, Trustee of the fund.

THE DANIEL G. FOWLE SCHOLARSHIP. An annual scholarship of $100 was founded in 1928 by Mrs. Walter F. Stearns (Mary H. Fowle) in memory of her father, Governor Daniel G. Fowle. Mrs. Stearns reserves the right to award the scholarship to a member of her own family; otherwise it will be awarded by the Superintendent of the Raleigh Schools and the Principal of the Raleigh High School to one Raleigh student on the basis of merit, character, and scholarship.

THE MARK R. BRASWELL SCHOLARSHIPS. (Established in 1938.) In memory of Dr. Mark R. Braswell, Class of 1888, of Rocky Mount, a fund of $20,000 has been created for the endowment of scholarships valued at $200 each to be awarded annually to entering freshmen by the Braswell Scholarship Committee. Four scholarships are awarded annually for a tenure of one year each. The Committee, at its discretion, may extend the tenure, thus enabling the award to be made to a previous holder. The qualifications for award are character, all-round development, high scholastic attainment, and financial need.

THE HERBERT WORTH JACKSON MEMORIAL SCHOLARSHIPS. (Established in 1938.) Endowed by Mrs. Annie H. Jackson of Richmond, Va., as a memorial to her husband, Herbert Worth Jackson, of the Class of 1886, and supplemented in 1940 by an additional gift by Herbert Worth Jackson, Jr. The fund maintains two $2,000 scholarships, awarded to entering freshmen, who shall be native-born residents of North Carolina, nominated by their high schools or preparatory schools. One candidate only may be certified by each school to the University Scholarship Committee, which in turn shall select from all boys thus certified twenty, who shall come to Chapel Hill for interviews with the Jackson Scholarship Committee. The basis of selection shall be high scholastic rank, character, qualities of leadership, achievements, physical health and vigor, and promise of future distinction. A four-year award is made every two years; 1949, 1951, 1953, etc.

BERNARD-GRAIL SCHOLARSHIPS. (Established in 1938.) One or more scholarships of $150 each, maintained by interest from the Grail Loan Fund. These scholarships were established in memory of Professor William Stanley Bernard who, as faculty adviser, was a source of inspiration and guidance to the Order of the Grail.

THE COUNCIL-MASSEY SCHOLARSHIP. Established in 1941 by C. Knox Massey of Durham, North Carolina, in honor of his father, C. W. Massey, University alumnus, civic and educational leader of Durham, and C. T. Council, University trustee, manufacturer, civic and educational leader of Durham. Scholarships are awarded from time to time as the interest from a principal fund of $25,000 makes them possible.

THE H. V. WILSON SCHOLARSHIP FOR STUDIES IN MARINE BIOLOGY. (Established originally in 1937, supported subsequently from a fund established jointly by Dr. Henry V. Wilson, Jr. and former students and friends of Professor Wilson.) The holder of this $100 scholarship is expected to pursue graduate studies or research at the seacoast during the summer of award.

THE KAY KYSER SCHOLARSHIPS. (Established in 1941.) A scholarship in music and a scholarship in dramatic art, established by Mr. Kay Kyser, Class of 1927, each providing one year's study in the University, including tuition, room, and board. Selection of the recipients, made by the Kay Kyser Scholarship Committee each year, is based on character, scholastic rank, qualities of leadership, achievements and promise of future distinction in music or dramatic art.

THE MARVIN B. SMITH, JR., MEMORIAL SCHOLARSHIP. (Established in 1944.) Established and endowed in 1944 by Mr. and Mrs. M. B. Smith, Sr., Miss Alyse Smith, and J. Harold Smith, of Burlington, N. C., as a memorial to their son and brother, Marvin B. Smith, Jr., of the Class of 1926. The fund maintains four scholarships, valued at $350 each, and annually awarded to entering freshmen who plan to have their major work in the School of Commerce. Applicants must be residents of North Carolina. The tenure of the scholarship is four years, provided the holder maintains high moral and scholastic standards. The basis of selection shall be high scholastic rank, character, promise of business leadership, and financial need.

THE CHI PSI SCHOLARSHIP. (Established in 1946 by the Trustees of the Chi Psi Fraternity Educational Trust.) One scholarship, not to exceed $200, to be awarded annually by the University Scholarship Committee to a regularly enrolled junior or senior student member of the Chi Psi Fraternity who has exhibited promise in scholarship and qualities of leadership.

THE ANDREW BERSHAK INTERFRATERNITY SCHOLARSHIP. (Established in 1948.) Established from contributions from University of

North Carolina students who are members of various social fraternities as a memorial to Andrew Bershak, Class of 1938. The fund maintains a scholarship valued at $2,000 covering a four-year tenure ($500 a year) subject to maintenance of high standing by the recipient as a student at the University. The basis of selection shall be high scholastic rank, character, qualities of leadership, and financial need.

JOSEPHUS DANIELS SCHOLARSHIP. In accordance with the will of the late Josephus Daniels, funds have been provided to establish a scholarship valued at $500 a year for four years to be awarded to a North Carolina student. This award is made on the basis of scholarship, character and citizenship, and financial need.

NATIONAL COLLEGIATE ATHLETIC ASSOCIATION SCHOLARSHIPS. The Faculty Scholarship Committee awards a limited number of scholarships to young men of athletic ability under the regulations of the National Collegiate Athletic Association. Information concerning these scholarships may be obtained from the Faculty Committee on Scholarships and Student Aid.

THE WILLIAM ISAAC WITKIN SCHOLARSHIP FUND. The income from a fund of $10,000 to be used as scholarships to be awarded each year by the University Scholarship Committee in accordance with its usual regulations. This fund was established by Mr. Isaac Witkin, of New York City, in gratitude for and in commemoration of the safe return from war service of his son, William Isaac Witkin, Class of 1943.

These scholarships are not open to students in the Schools of Law, Medicine, Dentistry, Pharmacy, Library Science, and Public Health. For scholarships open to students in these schools, please see the special bulletins of the schools.

This list does not include certain annual contributions for scholarships, which are not on an endowment basis.

### APPLICATION FOR SCHOLARSHIP

All applications for scholarships must be filed in the Student Aid Office. The University Scholarship Committee makes the awards, annually, on or about May 15 and from time to time during the year. All applications must be in the regular form prescribed by the University. Forms are supplied on request to the Director of Student Aid.

## Free Tuition

Free tuition is given to residents of North Carolina who have physical handicaps. Information and application forms are available upon request to the Director of Vocational Rehabilitation Division, State Department of Public Instruction, Raleigh, N. C.

## Loan Funds

THE DEEMS FUND. (Established in 1879.) A fund of $600 was established by the Rev. Charles Force Deems, D.D., late pastor of the Church of the Strangers, New York City, formerly a professor in the University, in memory of his son, Lieut. Theodore Disosway Deems. In 1881, the fund was enlarged by a gift of $10,000 from Mr. William H. Vanderbilt.

THE MARTIN FUND. Interest from this fund, established by the bequest of Mr. Thomas D. Martin, of Raleigh, became available for loans during the session of 1908-1909.

THE HOGUE FUND. Interest from a fund of $4,000, established by the Rev. R. W. Hogue, of Baltimore, is to be loaned to worthy students in the University.

THE HEWITT FUND. Interest from a fund of $18,700, established in 1916 by the bequest of Mr. Joseph Henry Hewitt, of Princess Anne County, Virginia, will be used for loans to "needy and deserving students" of the University.

THE HOLT FUND. The principal of a fund of $10,000, established by Mr. Lawrence S. Holt, Jr., of Burlington, is to be loaned to "worthy and needy students of the University." In addition, four scholarships in the University have been set up from the income of the fund.

THE VICTOR S. BRYANT FUND. The principal and interest of a fund of $7,500, established by the bequest of Mr. Victor S. Bryant, of Durham, will be used for loans to "worthy and needy young men" at the University.

THE SEELY FUND. A fund of $1,000 has been established by Mr. F. L. Seely, of Asheville, the principal of which is to be loaned to worthy and needy students, and the income therefrom to be added to the principal.

THE E. S. BLACKWOOD MEMORIAL LOAN FUND was created by bequest of Miss Katherine B. Underwood, of New York City, and con-

sists of $10,000 "to be used as a loan fund for needy students." This fund is administered in the same manner as the Deems Fund.

THE A. B. ANDREWS LOAN FUND. In May, 1925, the five children of the late Colonel A. B. Andrews (William J. Andrews, Class of 1891; Alexander B. Andrews, Class of 1893; Mrs. W. M. Marks; John H. Andrews, Class of 1897; and Graham H. Andrews, Class of 1903) established a fund of $2,500 of which the principal and interest are to be loaned to worthy students. This fund has been increased to $4,750 through subsequent gifts from Mr. Alexander B. Andrews, of Raleigh, N. C. The A. B. Andrews Loan Fund is administered as are other loan funds from the University and is established as a memorial to Colonel A. B. Andrews, a noted railroad builder in North Carolina and a Trustee of the University. It is requested by the donors that assistance from this fund be rendered first to students from those counties of North Carolina in which Colonel Andrews built railroads and second to students from those counties through which lines of the S.A.L., Norfolk-Southern, and Southern Railway systems run.

THE J. E. LEAR FUND. This fund of $5,244 became available in 1924. The fund was the result of installation work done by the senior class in electrical engineering under the supervision of Professor J. E. Lear.

THE JOSEPH E. POGUE LOAN FUND. This fund of $1,000 was presented to the University in April, 1930, by Mrs. Joseph E. Pogue as a memorial to her husband, the late Mr. Joseph E. Pogue, the fund to be known as the Joseph E. Pogue Loan Fund. The principal and interest are to be loaned to deserving students.

THE EDMONDS LOAN FUND. This fund of a little over $800 has been set up by the Class of 1910 as a memorial to W. R. Edmonds, a member of that class.

GRAIL LOAN FUND. In June, 1930, the Order of the Grail, an undergraduate organization at the University of North Carolina, gave $1,400 to be known as the Grail Loan Fund. Additional gifts by the Order of the Grail and income from interest have increased the fund to $3,000. The principal of this fund is loaned to worthy students and the income is used to support the Bernard-Grail Scholarships.

THE ALDEN JOSEPH BLETHEN III MEMORIAL LENDING FUND. During the fall of 1930, Col. C. B. Blethen, of Seattle, Wash., gave $2,000 to be known as the Alden Joseph Blethen III Memorial Lending Fund.

This he did as a memorial to his son, A. J. Blethen III, a member of the Class of 1934. The principal of the fund is to be loaned to deserving students.

THE ROCKINGHAM COUNTY ALUMNI LOAN FUND. In 1932, a fund of $713.32 was advanced by the Rockingham County Alumni Association. It is subject to recall by the Association.

THE RHO CHI LOAN FUND. The Xi Chapter of the Rho Chi Honorary Society has established a loan fund for deserving students of pharmacy.

THE CHARLES L. COON MEMORIAL LOAN FUND. A fund of $1,415 established by the administrators of the Charles L. Coon Memorial Loan Fund of Wilson, North Carolina, in September, 1934. The funds to be loaned to graduates of the Charles L. Coon High School of Wilson, North Carolina, upon the written approval of the school's superintendent and the chairman of the Board of Trustees.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN LOAN FUND. (Established 1936.) A fund of approximately $1,800 established by the local chapter of the American Association of University Women and administered by the University Loan Funds Office. Loans are made to women students enrolled in the Graduate School and in the School of Library Science. Applications are subject to approval by a committee of the Association upon recommendation of the Dean of the Graduate School or the Dean of the School of Library Science. Loans are limited in time to two years and require interest at the rate currently charged by the University for its regular loans.

THE JOHN B. WEAVER LOAN FUND. In 1937, a fund of $1,915 was established by Dr. William Jackson Weaver of Asheville, North Carolina, in memory of his father, John B. Weaver. It is administered under the same terms as the Deems Fund.

THE SHERMAN LOAN FUND. A fund established in 1939 by Dr. Joshua Sherman, Class of 1906, of Lancaster, Pa., and amounting at present to $1,419.28. The fund is available for student loans on the usual terms.

THE MAJOR DAVID C. AND MARTHA REEVES EDWARDS LOAN FUND. A fund established June 10, 1940, by a gift of $1,000 as a memorial to a father and mother of Alleghany County who educated four sons at the University. Donors have requested that assistance from this

fund be rendered first to relatives, second to students from Alleghany County, and third to other students from North Carolina and states adjacent to North Carolina. In any case, however, the recipient of the loan must comply with all requirements imposed by the University Loan Fund Committee.

THE WINSTON-SALEM DRUGGISTS' LOAN FUND. Organized Druggists of Winston-Salem in 1942 gave $200 to be loaned to worthy students of pharmacy.

THE LOAN FUND OF THE CLASS OF 1942. The class gift of $350 in 1942 was set up as a loan fund under the usual terms for the administration of such funds.

DAVID ANDERSON ALLEN FUND. Established in 1945 by the wife (Jennie Ann Efird Allen) and children (Paul Haywood and Mary Ann) of David Anderson Allen, who graduated with the Class of 1938. Lieutenant Allen died in the service of his country on March 19, 1945, on the *U. S. S. Franklin.* The income from this fund is available as a loan or gift to deserving students at the University from Mecklenburg County, North Carolina.

THE DR. JOHN R. EDWARDS LOAN FUND. This fund was established in 1945 by a gift of $1,500 to the University by Dr. B. O. Edwards, of Asheville, North Carolina, as a memorial to his son, the late Dr. John R. Edwards, a graduate of the University. This amount was later supplemented by an additional $1,500 from Dr. Edwards' daughter, Mrs. Foster Mackenzie, making the total fund $3,000. The principal and interest are to be loaned to deserving students, with preference given to North Carolina premedical students.

THE OLIVIA DUNN STUDENT LOAN FUND. (Established in 1946.) A fund of approximately $25,000 established at the bequest of Mary Olivia (Birdie) Dunn of Wake County as a memorial to her mother. The fund is to be loaned to worthy students in accordance with the usual terms of the University Student Loan Funds.

### The Emergency Student Loan Fund

In the winter and spring of 1932 the University faced a genuine emergency, growing out of an announced reduction of state appropriations by 30 per cent, and the fact that between five hundred and seven hundred students were without funds with which to continue their course. When this situation was presented by President

Graham, students ($2,057.14), faculty ($2,035.38), the people and community organizations of Chapel Hill ($970.22), various chapters of the D.A.R., U.D.C., and other committees of women, began building a student loan fund. Alumni and friends of the University everywhere contributed to raise the total of new loan resources to $109,000, known collectively as "The Emergency Student Loan Fund." The portions of that fund which for some appropriate reason were separately established are listed below. Unless otherwise indicated, the funds are loaned on the same terms as is the Deems Fund.

THE W. C. COKER LOAN FUND. A fund of $500 established February 2, 1932, by Dr. W. C. Coker, head of the Department of Botany of the University.

THE JESSIE KENAN WISE LOAN FUNDS. A loan fund of $25,000 established February 4, 1932, by Mrs. Jessie Kenan Wise, of Wilmington, N. C., and another loan fund of $47,000 in securities, the income from which may be loaned to students immediately, and the principal of which may be similarly used when made available through sale of the securities as opportunity for sale on favorable terms may arise.

THE BURTON CRAIGE LOAN FUND. A fund of $1,000 established February 6, 1932, by Mr. Burton Craige, 1897, of Winston-Salem, N. C.

THE BLAIR LOAN FUND. A fund of $500 established March 2, 1932, by the Hon. David H. Blair, 1898, and Mrs. David H. Blair, of Washington, D. C.

THE SARAH WATTS MORRISON LOAN FUND. A fund of $1,000 established March 4, 1932, by Mrs. Sarah Watts Morrison of Durham and Charlotte, N. C.

THE STUDENT LOAN FUND OF THE NORTH CAROLINA CONGRESS OF PARENTS AND TEACHERS, INC. A fund of $750 loaned to the student loan funds by Mrs. J. W. Burke, Treasurer, by authority of the organization named above.

THE SARAH GRAHAM KENAN LOAN FUND. A fund of $1,000 established March 7, 1932, by Mrs. Sarah G. Kenan, of Wilmington, N. C., to be used first by a designated student. When repaid, Mrs. Kenan will indicate its further usage.

THE MILO M. PENDLETON LOAN FUND. A fund of $1,000 established March 15, 1932, by Mrs. Katharine Pendleton Arrington as a me-

morial to her brother, Milo M. Pendleton, of the Pharmacy Class of 1902.

THE RICHMOND, VIRGINIA, ALUMNI ASSOCIATION LOAN FUND. A fund of $320 given in 1932 by the organization named above with the request that it be set so as to receive annual additions from the donors.

THE EDRINGTON SPENCER PENN AND CHARLES ASHBY PENN, JR., LOAN FUND. A fund of $1,000 established April 14, 1932, by Mrs. Charles Ashby Penn, of Reidsville, North Carolina.

THE C. W. TOMS LOAN FUND. A fund of $1,000 established May 19, 1932, by Mr. C. W. Toms, 1889, of New York City, in memory of his son, the late George Newby Toms, 1928.

THE MARGARET MCCAULL CARMICHAEL LOAN FUND. On May 25, 1932, a fund of $1,000 was established by W. D. Carmichael, Class of 1897.

THE ANNIE LOUISE WATTS HILL LOAN FUND. A fund of $1,000 established by Mr. John Sprunt Hill, of Durham, N. C., on June 4, 1932, as a memorial to his wife.

THE GEORGE BASLEY HISS LOAN FUND. A fund of $10,000 established in 1932 by Mrs. Bertha T. Hiss, of Charlotte, N. C., in memory of her husband, George Basley Hiss.

### APPLICATIONS FOR LOANS

Applications for loans will be considered when made in person by students registered in the University. The funds are limited in amount and are loaned only on the security of two approved signatures and at the legal rate of interest. Applications should be made in advance of registration to the Director of Student Aid.

## Self-Help Work

There are jobs available for students wishing to earn part of their expenses. Students work in the libraries, dining halls, Graham Memorial, Book Exchange, dormitories, Woollen Gymnasium, Kenan Stadium, Buildings Department, and other University divisions and offices. All jobs are assigned by the Self-Help Committee, solely on the bases of scholastic merit, financial need, and good character. Holders of jobs are required to maintain a scholastic average of at least C from year to year. Jobs off the campus, in Chapel Hill homes and in business firms, are not assigned by any committee or division

of the University. Such work is secured by the efforts of the student, the Director of Student Aid helping wherever possible. All inquiries about an application for work should be mailed to the Director of Student Aid before May 15, after which the jobs are assigned.

It is difficult for first-year students to do self-help work and carry successfully a full schedule of academic work. They are urged to devote full time, if possible, to their studies and related activities.

The Committee assigns the available jobs to those who, in its judgment, are most urgently in need of financial aid and who show high scholastic achievement. Each applicant is notified by personal letter of the Committee's decision on his application.

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## MEDALS AND PRIZES

THE MANGUM MEDAL IN ORATORY. (Established in 1878.) A gold medal founded by the Misses Mangum, late of Orange County, in memory of their father, Willie Person Mangum, Class of 1815, is continued by two lines of his descendants as follows: Mr. Willie P. Mangum Turner of Winston-Salem, N. C., and Mr. Willie P. Mangum Weeks of Washington, D. C., Class of 1915. This medal is awarded to that member of the senior class who, during the four years prior to his graduation, has excelled in oratory, debating, and scholarship.

THE EBEN ALEXANDER PRIZE IN GREEK. (Established in 1887.) A prize of $10 is offered annually to that member of the sophomore class who shall present the best rendering into English of selected passages of Greek not previously read.

THE BINGHAM PRIZE IN DEBATE. (Established in 1889.) This prize was established by the late Mr. R. W. Bingham in memory of his great-grandfather, father, and brother, and is continued by Mr. Barry Bingham. It is awarded annually to that student who, while actively participating in debating, shall have been most useful in the support of this activity.

THE BRYAN PRIZE IN POLITICAL SCIENCE. (Established in 1903.) A prize will be given annually for the best thesis in political science. The fund was established by the late William Jennings Bryan.

THE ARCHIBALD HENDERSON PRIZE IN MATHEMATICS, formerly THE WILLIAM CAIN PRIZE. (Established in 1908.) A gold medal is offered annually to that student who shall take the highest rank in Mathematics 32-33 (or in Mathematics 34-35-36). No student will be recommended for the prize unless he attains to grade B.

The Mildred Williams Buchan Prize. (Established in 1920.) A fund of $1,000 was given by Mr. Edward Robertson Buchan in memory of his wife. The income of this fund is to provide a prize in the Department of Philosophy.

The Patterson Medal. (Established in 1924.) A gold medal is offered annually by Dr. Joseph F. Patterson in memory of his brother, John Durant Patterson. This medal is awarded for general excellence in athletics to a student selected by a special committee.

Chi Omega Prize in Sociology. A prize of $25 is awarded by the local chapter of the Chi Omega Fraternity to the undergraduate woman student who writes the best paper on some subject in the field of sociology or public administration. The subject will be submitted to the undergraduate student body some time before the fifteenth of February. Papers must be handed in by the fifteenth of May. The Department of Sociology will select the subject and judge the papers. The prize will be awarded at commencement.

The Buxton Williams Hunter Medal in Pharmacy. A gold medal is offered annually by Mr. D. R. Davis, of Williamston, in honor of his uncle, Mr. Buxton Williams Hunter, of New Bern, and is awarded to that student who has shown outstanding qualities of leadership and scholarship and who has done conspicuous work in the Student Branch of the N.C.P.A.

The Lehn and Fink Gold Medal in Pharmacy. (Established in 1924.) This medal is given annually by Lehn and Fink of New York City, and is awarded to the student in the graduating class making the highest average during the four years of study.

The Algernon Sydney Sullivan Award. (Established in 1928.) To be bestowed annually upon one man and one woman of the graduating class who have best demonstrated an attitude of unselfish interest in the welfare of their fellowmen. The award shall not be based upon scholastic, athletic, or other collegiate attainments.

The Roland Holt Cup in Playwriting. (Established in 1936 by Mrs. Roland Holt in memory of her husband.) This award is made each year by the Department of Dramatic Art for excellence in playwriting.

The John Johnston Parker, Jr., Medal for Unique Leadership in Student Government. (Established in 1941.) This gold medal is

given annually by Judge and Mrs. John J. Parker in memory of their son, John Johnston Parker, Jr., Class of 1937, who rendered distinguished and sacrificial leadership as President of the Student Council in one of the critical years in the history of Student Government. This medal is awarded by a special committee appointed by the President of the University to that student who has demonstrated most clearly the highest qualities of leadership in perpetuating the spirit of honor and the process of student self-government.

THE PHI BETA KAPPA AWARD. (Established in 1941.) An award amounting to $100 is given annually by the local Chapter of the Phi Beta Kappa National Honorary Fraternity to that member of the rising junior class (eligible for self-help work) who has made the highest scholastic average during his freshman and sophomore years.

THE ERNEST H. ABERNETHY PRIZE IN STUDENT PUBLICATION WORK. Mr. Ernest H. Abernethy, 1922, of Atlanta, established in 1941 an annual award of a plaque and $50 in cash, which is to be presented to the student who is adjudged by a committee to have done the most distinctive work during the current year in the field of student publications.

THE FOY ROBERSON, JR., MEDAL. A gold medal is offered by Dr. and Mrs. Foy Roberson in memory of their son, Foy, Jr., Class of 1940, varsity basketball 1939 and 1940; Second Lieutenant, Army Air Corps; killed in collision at sea, December, 1941. Awarded annually for the chief contribution to team morale in basketball.

THE JOSEPHUS DANIELS SCHOLARSHIP MEDAL. (Established in 1941.) A gift from the family of the Hon. Josephus Daniels to be invested and the income used to provide annually the Josephus Daniels Scholarship Medal for the University of North Carolina unit of the Naval Reserve Officers Training Corps.

THE VALKYRIE CUP AWARD. (Established in 1941.) The Valkyries are given funds annually from the Coed Senate to make this award available to the senior woman adjudged most outstanding on the University campus.

THE ALPHA CHI SIGMA PRIZE IN CHEMISTRY. (Established in 1942.) A prize of $100 is awarded annually by the local Chapter of the Alpha Chi Sigma Fraternity to the undergraduate student of chemistry selected by a committee as best exemplifying high scholarship, leadership, and personality.

THE ALBERT RICHMOND BOND AWARD IN ENGLISH LITERATURE. This award was established in 1947 by Professor Richmond P. Bond in memory of his father. It is awarded annually by the Department of English to the member of the graduating class with the highest distinction in English literature.

THE WILLIAM CHAMBERS COKER AWARD IN SCIENCE. (Established in 1948.) A cash award of $50 is awarded annually by the Elisha Mitchell Scientific Society to the graduate student whose thesis or dissertation shall be adjudged the best of those submitted for a graduate degree in the Science Division.

THE ALPHA KAPPA PSI SCHOLARSHIP KEY. Alpha Tau Chapter of Alpha Kappa Psi, a professional fraternity in Commerce, awards annually the Alpha Kappa Psi scholarship key to the male senior student pursuing a degree in the School of Commerce who has attained the highest scholastic average for three years of collegiate work in this University.

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## REGULATIONS

### Special Notice to Students

*This catalogue, issued in the spring of each year, is intended to give such a description of the work of the University and such a digest of its rules as are needed by the students. Neither the courses announced nor the rules given are valid beyond the succeeding year, for before the end of the succeeding year a new catalogue will have been issued superseding all previous catalogues. Ordinarily a student may expect to be allowed to secure a degree in accordance with the requirements of the curriculum laid down in the catalogue in force when he first entered the University, or in any one subsequent catalogue published while he is a student; but the faculty reserves the right to make changes in curricula, as in rules, at any time when in its judgment such changes are for the best interests of the students and the University.*

### Registration

All students are expected to present themselves for registration in accordance with the plan of registration established for the current year. All students registering here for the first time will report for physical examination to the Infirmary and present at registration a clearance card from the University Physician. Failure to attend to this

matter before registering causes extra expense to the University and entails for the student the payment of an extra charge of five dollars ($5.00).

Registration for credit for any course is limited to the first three full days of instruction of a term, unless the late registration is approved by the instructor concerned and the dean.

### Payment of Bills

Bills for the fall term are payable at the time of registration. Bills for the winter and spring terms are payable at the Cashier's office on the first class day of the term, and thereafter according to a schedule announced. Failure to pay or to make proper arrangements for payment results in the assessment of an extra fee of $5.00.

### Delayed Registration

Any student registering later than the time appointed for his registration must pay five dollars ($5.00) as an additional fee for delayed registration. *No appeal from the imposition of the late registration charge of five dollars will be granted, unless the delay results from circumstances clearly beyond the student's control.* Such appeals must be made in writing to the Chancellor, must show justification for the delay in registering, and must bear the approval of the dean of the division of the University in which the appellant is enrolled.

### Arrangement of Courses

Attention is called to the reduction of credit for freshman and sophomore courses when taken late in the student's career. Only half credit is allowed if a required freshman course is taken after a student begins his junior year or if a required sophomore course is taken after he begins his senior year.

No student will be allowed to take fewer than three full courses a quarter, unless he has the permission of his dean. A load up to eighteen hours a week may be taken without any restrictions; one of nineteen or twenty hours a week requires a scholastic average of at least C in the preceding term; one of twenty-one or more hours a week requires a scholastic average of at least B in the preceding term and the approval of the student's dean. A student may not take more than twenty-two hours a week.

A student desiring to change his courses must make written application, which, after approval by his faculty adviser, will be considered by the dean. The written permission of the dean must be presented at Registration Hall.

*Changes in registration are limited to the first three full days of instruction of a term. No refund of sums paid for tuition will be made for courses dropped after the period of seven calendar days, except upon the written recommendation of the dean concerned.*

## Assignment of Rooms

The rooms in the University dormitories and accommodations for families are assigned to students by the Housing Officer, subject to the special regulations given below.

The University reserves the right to require any student whom it considers, for any reason, an undesirable tenant to vacate a room in the University dormitories.

In order to retain his room for the next scholastic year, each student must file with the Cashier before April 20 an application and a deposit of $6.00 as an option. The rooms thus applied for will be retained until September 1, when first payment of rent is due. The option deposit will be forfeited in case the applicant does not himself pay the rent and occupy the room. Rooms not applied for or made vacant by failure to pay at the proper date will be assigned in the order of application.

The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of an occupant of a room to sell or transfer his right to occupancy will be considered a fraudulent transaction and will result in forfeiture of the room by the new lessee.

The occupant of a room will be held directly responsible for any damage done to his room or to its furniture.

No dogs shall be kept in the University dormitories, trailer courts, Victory Village, Abernethy Hall, or Carolina Inn Apartments. Breach of this regulation leads to forfeiture of the room.

## Conduct

By order of the Board of Trustees the faculty is directed to discipline or dismiss from the University any student who is known to engage in drinking intoxicating liquors, gambling, hazing in any form (presence at hazing is regarded as participation), or to be guilty of dissolute conduct. See also Student Government, page 82-83.

Students persistently neglectful of duty, or addicted to boisterous conduct or rowdyism, may be required to leave the University.

Students, unless bona fide residents of Chapel Hill, when suspended from the University for disciplinary reasons, must leave the campus and Chapel Hill within forty-eight (48) hours or forfeit the right to readmission at any time.

## Attendance

Regular attendance upon meetings of classes is considered a student obligation.

The responsibility for attendance is placed in the hands of the instructors in the various courses. Departments may make uniform regulations governing attendance if they so desire. No "allowed" number of cuts is automatically granted to a student in any course.

Instructors will keep a daily record of attendance and report to the Central Office of Records the name of any student who has been absent three consecutive meetings of a class.

Instructors will warn a student who has been absent more than seems reasonable. Further absences give instructors the right to request the dean concerned to exclude such a student from the class. If the dean is aware of extenuating circumstances, he will confer with the instructor before action is taken.

Any student who has attained the honor roll during two successive terms will be exempt during the ensuing term from the regulations governing absences and exempt thereafter as long as he maintains the honor roll average. To the foregoing regulation there are to be the following exceptions: (a) the privilege of absences does not apply to requirements of attendance relative to written or laboratory work or to quizzes and examinations; (b) the privilege earned by the student will be forfeited if immediately before or after holidays he is absent without excuse; (c) it is understood that the instructor in any course has the right to consider participation by the student in class discussion as a necessary part of the work upon which he bases the final grade. Thus a student having the honor roll privilege who absents himself more than the instructor thinks is reasonable for this purpose may earn a lower grade, as a result of non-attendance, than would be shown by the examination grade alone.

Departments or instructors may, on occasion, permit a student to attend or engage in an educational activity other than that of the class as a substitute for class attendance.

The deans are expected to use their judgment in the matter of allowing a student to remain in residence after having been dropped from one or more classes. The deans will also cooperate with the instructors in bringing students to a realization of the consequences of excessive absences.

Instructors will report to the Central Office of Records all absences occurring at the beginning of each term and immediately before and after holidays. The penalty for such absences is loss of membership in the classes missed. Favorable action by the Committee of Deans is necessary before the student may be reinstated; moreover a fee of $2.50 is charged the student for each such absence, with the proviso that the total fee shall not exceed $7.50.

Absences from class attendance for cause may be excused. Such absences are those resulting from (a) participation in recognized University activities, as those of the Glee Club, debating and athletic teams and the Playmakers, when occurring away from Chapel Hill; such excuses are to be issued in advance by the Recorder; (b) actual illness, certified to by the attending physician within forty-eight hours from the beginning of the illness; and (c) emergencies caused by extraordinary circumstances, when excused in advance by the student's dean.

The Central Office of Records will furnish to the student upon request and for the information of his instructors a record of days he has been excused.

Any student who is absent from a quiz or an examination at the appointed time without excuse as defined above will not be permitted to make up this quiz or examination. Any department may impose a fee not exceeding one dollar ($1.00) upon the student having excuse for such absence for the privilege of taking a special quiz or examination or a make-up laboratory exercise.

No student, unless exempted by having attained the honor roll privileges of optional attendance, shall be given credit in the University for any course unless he has attended at least 75 per cent of the class meetings of the course during the term.

Departments may require students who have been absent, whether the absences are excused or not, to make up work covered during the periods of absence.

The grade of a student who quits a course without the permission of the dean of his college or school is recorded officially as F.

The grade of a student who drops or is dropped from a course in

which he is failing at that time shall be recorded as F unless, in the judgment of his dean, his failure was caused by circumstances beyond his control.

## Examinations

### COMPREHENSIVE EXAMINATIONS

Only a student who is a candidate for honors is now required to take a comprehensive examination. This examination is in the field of the student's major.

### QUIZZES

By action of the faculty, quizzes are not to be given during the last five days of any quarter.

### SPECIAL EXAMINATIONS

Special examinations for the removal of conditions and for advanced standing will be given in 1950 as shown below:

*Friday, September 15*

8:30 A. M.

Economics
Romance Languages
Zoology

2:00 P. M.

Geology and Geography
Psychology
Art
Physical Education

11:00 A. M.

Education
English
German

4:30 P. M.

Comparative Literature
Greek
Physics
Sociology

*Saturday, September 16*

8:30 A. M.

Botany
Latin
Journalism

2:00 P. M.

Music
History
Mathematics
Political Science

11:00 A. M.

Chemistry
Commerce
Philosophy
Dramatic Art

4:30 P. M.

Any examinations made necessary by conflicts.

A special examination may be taken as scheduled above by a student who has received the condition grade (E). Provided he has no conflict with a course regularly taken by him in the term, such a student may take the examination with the class in the same subject at any regular term examination within a year after he has made the grade E. A senior who makes a grade of E in his last term of residence is allowed to take a special examination for removal of the E not earlier than three days after his last examination in that period of examinations. The grade E becomes F if the student fails to pass a re-examination within one year.

Examinations to remove the grade of E at other times than those specified in the preceding paragraph may be arranged between the instructor and the dean of the school involved.

Special examinations for students who have been officially excused from regular examinations on account of sickness or have been absent for some necessary cause and therefore excused may be held at suitable times fixed by a recorder and the instructors concerned. Such examinations must be taken within twelve (12) months of the date of absence.

To be entitled to take a special examination within a term, or at the September period, or at a regular term examination period, the student is required to file a written request with a recorder at least one week prior to the time for the examination.

Papers handed in at a special examination by students who have been officially excused from the regular examination will be graded by the usual system; all others will be marked "passed" or "failed."

### REGULAR FINAL EXAMINATIONS

Regular written examinations are required at the end of each term in all courses except those whose nature makes written examinations unnecessary. *Approval of such exceptions must be secured in advance from the Dean of the College of Arts and Sciences.*

*Papers written in final examinations are not to be carried away from Chapel Hill to be graded.*

Final examinations except in laboratory practice may not be held at any times other than those specified in the preceding regulations.

No examinations may be held later than 7:00 P. M.

All examinations must be held in Chapel Hill.

In exceptional cases arrangements can be made to take examinations *in absentia*. There is a fee of $10.00 for each such examination.

Applications for examinations *in absentia* should be directed to the dean of the school in which the student is registered.

Examinations should be limited to a period of three hours. In courses in which a considerable portion of the examination is of a practical nature the instructor may extend the time at his discretion.

The examination schedule at the end of each quarter having once been fixed cannot be changed, and the examination must be held at the time shown on the schedule.

No students other than the following may take the examination in any course: (1) regularly enrolled members of the class whose names have been reported from the Office of Records to the instructor as having registered in due form for the course; and (2) those whose names have been reported from the Office of Records as having the right to take special examinations in that course.

Students absent from an examination without an official excuse or present and failing to submit examination papers are reported absent. This mark is equivalent in every respect to grade F or failure, and is so recorded in the Office of Records.

Each student is required to subscribe his name to the following pledge or its equivalent on every paper: "I hereby certify that during this examination I have neither given nor received aid." The instructor will not report a grade for any student whose examination paper lacks this pledge.

Schedules of examinations at the ends of the terms and in the fall are to be so arranged that examinations set for the last day of the period shall be set for the first day of the next period.

## Standing

After the close of each term, reports of the standing of all students in all their studies are sent to parents or guardians. The reports are based upon the following system of marking:

| | |
|---|---|
| Grade A, Excellent. | Grade D, Barely passed. |
| Grade B, Good. | Grade E, Conditioned. |
| Grade C, Fair. | Grade F, Failed. |

Grade I, Work incomplete.

The grade I may be converted into one of the other grades by completing within a period of twelve months such additional assignments as may be required by the instructor in the course. A grade of I not so converted becomes F.

When a student has shown marked deficiency in the use of English in any course, his grade in that course may have attached a "composition condition" (cc). This condition, while not affecting a student's eligibility for continuance in the University, must be removed before final credit will be allowed. A student who receives such a condition must take a diagnostic test before the middle of the following term, and his registration for the next term following this term may not be completed until he has taken the test. If this test shows that the student needs to take a course or laboratory work to remove his condition, he must proceed actively and systematically toward the removal of his condition in the second term following that in which he receives it. The Secretary of the Committee on Conditions in English Composition will determine those who need remedial work.

A student must attain a grade of D to pass in any study. Grade E indicates that the student is conditioned but may remove the deficiency by special examination as explained above. Students receiving grade F must repeat the study to receive any credit for the same.

Any student, after conference with the instructor concerned, may appeal from a "course grade," provided the appeal is presented in writing to the Chancellor within thirty regular college days after the grade has been reported. The Chancellor, after bringing the appeal to the attention of the head of the department concerned, will refer it for a final decision to the administrative board of the college or school in which the student is enrolled.

### ELIGIBILITY FOR GRADUATION

To be eligible for graduation, a student enrolled before September, 1947, must secure a grade of C or higher on at least half of his work; a student first enrolled in or after September, 1947, must secure an over-all average of C.

Interpretation of this ruling:

(1) A student who completes the required courses but with grades which do not entitle him to his degree will be allowed to take additional *junior-senior courses* until he meets the requirement of the rule.

(2) A transfer student with advanced standing will come under this rule. In and after September, 1947, an over-all C average in the work presented is required for admission to advanced standing.

In the transfer of grades from another institution, work with the lowest passing mark is counted as work passed but not as hours credited toward graduation.

(3) To be eligible for graduation, a student must secure the grade of C or higher on at least 30 quarter hours of work in his major.

(4) Every candidate for a degree must present at least a C average (one quality point for each course undertaken). The result obtained by dividing the total number of quality points by the total number of courses undertaken must be 1.0 or higher. The quality points are given as follows:

A=3 quality points per whole course
B=2 quality points per whole course
C=1 quality point per whole course
D=no quality points
E=no quality points
F=no quality points

A half course (one carrying 2½ or 3 quarter hours) yields half the quality points indicated in the table.

This applies only to the work taken at this University; grades transferred from another institution are not considered in computing the C average.

### RANK BY CLASSES

A student to be ranked as a sophomore must have passed at least thirty-six quarter hours; to be ranked as a junior, at least seventy-eight quarter hours; to be ranked as a senior, at least one hundred thirty-six quarter hours.

### ELIGIBILITY FOR CONTINUED RESIDENCE

An undergraduate student, in order to be eligible to continue in the University, must qualify according to the following requirements: A freshman must pass at least one full course each quarter and six full courses during his first three quarters. If he is in residence only two quarters, he must pass four full courses. After his third quarter a student must pass at least one full course each quarter and a total of seven full courses during the fourth, fifth, and sixth quarters. If he is in residence only two of these three quarters of the normal sophomore year, he must pass a total of five full courses. After the sophomore year, or first six quarters, the student to remain eligible must pass at least one full course each quarter, four full courses in any two consecutive quarters, and seven full courses in any three consecutive quarters. Ineligible persons are not to be considered members of the University. In case a student has been handicapped by circumstances beyond his control, he may appeal for readmission to the Com-

mittee of Deans by means of a written petition stating his case and sent to his dean. Deficiencies may be made up by correspondence work or in the summer quarter. An additional full course over the minimum number of courses required to remain in the University must be taken if the student is to make himself eligible by correspondence or summer work in this University. A student may not make himself eligible by taking work at another institution, unless approval by the Director of Admissions and his dean is secured in advance.

If a total load of two and one-half or more courses is taken during one summer quarter by a student in or after his sophomore year, the summer quarter is counted as a regular term, subject to the rules of eligibility stated here.

No student who fails to qualify under these regulations may be readmitted to any division of the University except by vote of the Committee of Deans. The student must present written application for readmission to his dean before the opening of any term. Action upon such application is taken by the Committee of Deans.

### Withdrawals

If a student wishes to withdraw at any time other than the end of a term, a formal withdrawal, which is prerequisite to honorable dismissal or re-entrance to this institution, must be approved by the dean. Such a withdrawal will be approved only after full investigation of the circumstances and after the lapse of twenty-four hours from the time the first application is filed with the dean. The withdrawal form after approval by the dean must be filed promptly with a recorder in room 302, South Building.

If a student withdraws after the mid-term and is reported as below passing in two or more courses, that term will be counted as a term in residence in all computations of his requirements for readmission. If a student withdraws before mid-term, it will be left to the discretion of the dean as to whether or not that term is to be counted as a term in residence. The dean's verdict will be indicated specifically on the form used for withdrawal.

To a student withdrawing within the first ten weeks of a term, refund on a pro-rata basis of the amount paid for *tuition* is made.

### Fraternities

Students may join fraternities after registration at the opening of any term, provided they are eligible under the special regulations of the faculty as announced by the Standing Committee on Fraternities.

## Transcripts of Record

Honorable dismissal has reference to conduct and character only. It will not be granted unless the student's standing as to conduct and character is such as to entitle him to continue in this University. Furthermore, in every statement of honorable dismissal full mention will be made of any probation, suspension, or other temporary restriction imposed for unsatisfactory conduct which is still in force when the papers of dismissal are issued.

Statement of record has reference to the recorded results of a student's work in the classroom. It will in every instance contain all the important facts pertaining to the student's admission, classification, and scholarship. In particular, no partial or incomplete scholastic record (for example, with failures omitted) will be given without clear evidence that it is partial or incomplete. If the student's scholarship has been such as to prevent his continuance in this University or to render him subject to any probation, suspension, or other temporary restriction which is still in force at the date of the record, a plain statement of any and all such facts will be included. Such information will be given as will make clear the system of grades employed, the number of exercises a week devoted to each course, etc.

Transcripts of record, except the first, which is furnished without cost, will be made upon payment of one dollar ($1.00) for each copy desired.

## Intercollegiate Athletics

The University is a member of the Southern Conference, and its rules necessarily conform to the rules of the Conference.

## Regulations Governing Dramatic, Musical, Debating, and Other Leading Activities of the Student

1. No student will be allowed to take part in dramatic, musical, debating, oratorical, or similar events entailing absence from the University if his parents (or guardian) object to such participation.

2. Any student who was in attendance at the University during a previous term must have passed, during his last term of attendance, satisfactory examinations upon at least five hours, or their equivalent, before he will be allowed to represent the University in any dramatic, musical, debating, oratorical, or similar event of a public nature, or in any other leading activity.

3. Any student reported during the course of any term as deficient in a majority of his classes may be prohibited by the dean of his school from participating in any dramatic, musical, debating, oratorical, or similar event, or any other leading activity, until such deficiency is removed.

4. There shall be a scholastic requirement of thirty-five quarter hours, half C grade or better, during the preceding three quarters of residence, or forty quarter hours, half C grade or better, if summer school or correspondence work is necessary in addition to three regular terms.

5. No team or club will be allowed to be absent from the University more than seven lecture days in any term.

*Part Three*

# THE COLLEGES AND SCHOOLS

## THE GENERAL COLLEGE

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Dean*

### *†The Administrative Board

ARTHUR PALMER HUDSON, Ph.D., *Professor of English* (1950)

CHARLES BASKERVILL ROBSON, Ph.D., *Professor of Political Science* (1950)

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education* (1951)

ALLAN WILSON HOBBS, Ph.D., *Professor of Applied Mathematics* (1951)

EDWIN CARLYLE MARKHAM, Ph.D., *Professor of Chemistry* (1951)

DUDLEY DEWITT CARROLL, *Professor of Economics and Dean of the School of Commerce* (1952)

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish* (1952)

ARTHUR MELVILLE JORDAN, Ph.D., *Professor of Educational Psychology* (1953)

HENRY ROLAND TOTTEN, Ph.D., *Professor of Botany* (1953)

SAMUEL THOMAS EMORY, Ph.D., *Professor of Geography* (1954)

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education* (1954)

WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences* (1954)

### The Committee of Advisers in the General College

‡MICHAEL ARENDELL HILL, JR., A.M., *Associate Dean*

‡CECIL JOHNSON, Ph.D., *Associate Dean*

FLOYD HARRIS EDMISTER, Ph.D.

CLYDE CASS CARTER, Ph.D.

FREDERICK CARLYLE SHEPARD, Ph.D.

CORNELIUS OLIVER CATHEY, Ph.D.

JACQUES HARDRÉ, Ph.D.

GERALD ALAN BARRETT, A.B., LL.B.

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*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

‡Representatives of the Advisers on the Administrative Board.

## General Statement

During his freshman and sophomore years in the University at Chapel Hill every student is a member of the General College unless he enters the School of Pharmacy. The studies in the General College are intended: (1) to offer an experience in a sufficient variety of basic and liberal subjects to constitute the foundations of that general education which is regarded as essential to balanced development and intelligent citizenship, (2) to supply opportunities for the discovery of intellectual interests and occupational aptitudes, and (3) to provide preparation for later collegiate or professional training. These studies are, specifically, English composition and literature, a foreign language, natural science, social sciences, mathematics or Latin or Greek, and hygiene. The options within these requirements appear below in the summaries of the several programs. The student thus takes certain courses basic to all programs of study and in addition chooses other courses in anticipation of advanced work in special fields or on the basis of other personal considerations. If he knows what his later program of study is to be, he can in nearly all cases choose a subject in that field as part of his work in the General College. If he does not know what his program is to be, he may take the general program leading to a degree in arts and sciences or in commerce, with the assurance that he can reach a decision during his undergraduate career and make necessary changes with minimum loss of time.

The members of the General College are of four distinguishable but overlapping types: (1) those who will proceed to the usual academic degrees at the end of four years, (2) those who will enter professional schools after three or four years, (3) those who are preparing for teaching or scientific investigation, or both, and (4) those who will take less than a complete academic program. Through the advisers the General College attempts to assist each student in appraising his qualifications and objectives and, within the limits set by its standards and resources, undertakes to adapt its offerings to his interests and needs. Thus a deficiency in a foreign language may be overcome by taking the elementary courses. In the converse case of mastery in preparatory school or otherwise of work offered in college, the student is encouraged to meet the collegiate requirement by examination. Those who have responsibilities which limit the time available for studies are allowed to take less than the normal academic program. Those who attain distinction in the normal registration are permitted to take additional courses so as to enable them to enrich their programs or to

graduate at an earlier date. By such means the college encourages each student to start with the work which he is prepared to do and to go forward with it in the way that is most appropriate in his individual case.

Upon satisfactory completion of the work of the General College, the student will normally enter one of the divisions of the University which administer the curricula of the junior and senior years. The College of Arts and Sciences offers curricula in (1) the usual liberal arts subjects, (2) mathematics, (3) chemistry, geology, physics, medicine, and bacteriology (each with its special Bachelor of Science degree), (4) pre-law, pre-medical, and pre-dental programs, with and without the A.B. degree, (5) medical technology, (6) public health, (7) public health nursing, and (8) industrial relations. The School of Commerce presents curricula preparatory for the various careers in (1) business, (2) foreign trade and the consular service, (3) other government services, and (4) law. The School of Education offers curricula leading to careers in teaching, administration, and supervision. The newly established School of Journalism provides training for newspaper work and related careers.

## Naval R. O. T. C.

All of the courses offered by the Department of Naval Science and Tactics count toward graduation. The academic courses offered by the department are credited as follows:

(1) In programs of study leading to the degrees of Bachelor of Arts and Bachelor of Arts in Education, naval science may be substituted for freshman social science and for two courses of required natural science. The other naval science courses may count as non-divisional subjects in the junior and senior years.

(2) For the degree of Bachelor of Science in Commerce, the naval science courses may be substituted for one year of required natural science. In the junior and senior years, naval science courses count as non-divisional subjects and for one additional course to be approved by the Dean of the School.

(3) In the other curricula leading to the degree of Bachelor of Science, naval science courses may be substituted for freshman social science and for electives. In addition, the Dean and the Administrative Board are authorized to substitute these courses for required subjects after consideration of the circumstances of each case.

(4) All naval science students are required to take freshman and sophomore English, Mathematics 7, 8, and Physics 24-25. It is recommended that they take Mathematics 31, 32, 33.

### Air R. O. T. C.

The courses offered by the Department of Air Science and Tactics are included as part of the courses required for the several bachelors' degrees.

For students in the School of Commerce, the R. O. T. C. courses are substituted for two of the required courses in laboratory science in the freshman and sophomore years. In the junior and senior years they count as five non-divisional elective courses.

In the College of Arts and Sciences and in the School of Education, the freshman and sophomore R. O. T. C. courses are substituted for two required courses. This substitution may be for Social Science 1-2, for two courses of required laboratory science, or for one course of social science and one course of laboratory science. In the junior and senior years the R. O. T. C. work counts as five courses. These five courses may be either non-divisional electives or allied courses at the discretion of the dean.

Students who participate in the Air R. O. T. C. program enter it with the understanding that they must continue throughout the first two years at least. At the end of two years they may elect to continue in the program or to withdraw from it. Those who elect to take the third year's work enter upon it with the understanding that normally they must take both the third and fourth years.

### Credit by Examination

Provision is made for students who present proper credits to take substantiating examinations for advanced standing in whatever subjects the Dean of the General College may deem advisable. This opportunity is open to those who have taken, in high or preparatory school, work over and above the minimum entrance requirements which is approximately equivalent to some of the freshman-year program in the General College. The passing of such examinations will enable the student to take during his first year the next course in the subject on which he is examined or to take other subjects not ordinarily pursued by freshmen. Formal application for examinations of this sort should be made to the Dean of the General College sufficiently far in advance of the date of registration to enable him to arrange for

the examinations. For this purpose, fifteen days' notice suffices. No charge is made for these examinations. There is a charge, however, for credits obtained by examination.

If a student by a placement test or by some other criterion is placed in advanced work and if he completes the advanced work (one or more courses where the courses are in sequence) with an average of C or better, he will be given credit for the omitted freshman work with the grades that he made on the advanced work; if he completes the advanced work with less than a C average, he will be relieved of the requirement of the freshman work omitted but will not receive hour credit for the omitted work.

### Guidance of Students in the University

The University conceives education to be directed toward the best development of each individual and accordingly seeks to study each student in terms of his background of experience and his potentialities of interest, ability, and cultural needs. Each student is the special charge of a member of the Committee of Advisers.

Before admission of the student the University obtains from him and his school principal information concerning the applicant's personal history. This information is made the basis of a cumulative personal record of each student. To it are added placement test scores, results of physical examination, grades on courses, record of activities, etc. This record is in the hands of the General College adviser from the time the applicant is accepted until he completes the General College course. Then it is available to the departmental adviser in the major field of study chosen and to the vocational adviser.

In this way the University tries to deal with each student from admission to graduation as an individual personality about whom a definitely responsible adviser has the needed information. In using this information the personal interest and experience of the adviser may be supplemented in case of special need by members of the general administration competent in such special fields as health, financial aid, vocational guidance, and religious and moral problems.

### Programs of Study

With a view to the most effective preparation of those who will proceed to degrees through any of the regular curricula, the General College offers programs of study as follows:

## Bachelor of Arts

### FRESHMAN YEAR

Required:
- English 1-2
- Social Science 1-2
- Hygiene 11
- Physical Education 1, 2, 3

Choose two courses:
- Chemistry 1-2-3 or 1-2-31
- Geology 1, Geography 38
- Geology 41, 42
- Physics 20, 24, 25
- Botany 1, Zoology 1

Choose one:
- Mathematics 7, 8 or R, 7X, 8
- *Greek 3-4 (or 1-2)
- *Latin 3-4 (or 1-2)

Choose two courses:
- †French 3-4
- †German 3-4
- †Greek 3-4
- †Latin 3-4
- †Spanish 3-4

### SOPHOMORE YEAR

*Humanities*: Four courses to be selected by choosing A, or B, or C below:

A. English and fine arts, two courses:
   English 3, required.
   One of the following: English 4 or 5 or 6; Art 41 or 42 or 43; Music 41; Religion 28.
   Classical language and literature, two courses.

B. English and fine arts, two courses as indicated in A, above.
   French or German or Spanish, two courses.

C. Classical language or literature in the original or in translation, two courses from:
   Greek 1-2; 3-4; 21-22; 21-82; 31, 61.
   Latin 1-2; 3-4; 21-22; 32, 62.
   French or German or Spanish, two courses.

*Social Sciences*: Two courses. Choice may be made from the following:
- Economics 31-32
- Education 41 and an additional course to be approved by the School of Education.
- History 21, 22
- History 41, 42
- History 44, 45
- Philosophy 21, 22, 41, 42
- Political Science 41, 42
- Sociology 51, 52

*Natural Science and Mathematics* as follows:

Two courses in natural science, or one course in natural science and one course in mathematics. These with the freshman courses in science must include one course in a physical science (chemistry, physics, geology, geography) and at least one course in a biological science (botany, zoology, psychology). Selections may be made from the following courses:
- Anthropology 41
- Astronomy 31, 32
- Botany 41, 42
- Chemistry 1-2-3 or 1-2-31; 41, 42

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*Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not have classics in high school.

†Students placed in Foreign Language course number 1 may meet the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

Geology 1, Geography 38
Geology 41, 42
Mathematics 31, 32, 33, 34, 35, 36
Physics 20, 24-25, 34, 35
Psychology 24, 25
Zoology 41, 42

*Physical Education* 4, 5, 6

## Bachelor of Science in Commerce

### FRESHMAN YEAR

Required:
- Botany 1 or Zoology 1, Geography 38
- English 1-2
- Social Science 1-2
- Mathematics 7, 9, or R, 7X, 9
- Hygiene 11
- Physical Education 1, 2, 3

Choose one:
- *French 3-4
- *German 3-4
- *Spanish 3-4

### SOPHOMORE YEAR

Required:
- English 3 and 4 or 5 or 6 or fine arts
- Economics 31-32, 41
- Physical Education 4, 5, 6

Choose three:
- Commerce 51
- Commerce 71
- Commerce 66
- Political Science 41

Choose two courses:
- Astronomy 31, 32
- Botany 41, 42
- Chemistry 1-2-3 or 1-2-31
- Geology 1, 41, 42
- Physics 20, 24-25
- Zoology 41, 42
- Mathematics 31, 32

## Bachelor of Science in Chemistry

### FRESHMAN YEAR

Chemistry 1-2-31 or 1-2-3
English 1-2
†German 3-4
Mathematics 7, 8 or R, 7X, 8
Hygiene 11
Physical Education 1, 2, 3

### SOPHOMORE YEAR

English 3 and 4 or 5 or 6 or fine arts
†German 21, 22
Chemistry 31 if not taken previously, 51, 42, 41
Mathematics 31, 32, 33
Physics 24-25 or 34-35
Physical Education 4, 5, 6

*Commerce students must pass a test of reading knowledge, or make a grade of A or B in course 4, or continue with courses 21 and 22.

†Students placed in French 1, German 1, or Spanish 1 may complete the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

## Bachelor of Science in Geology

FRESHMAN YEAR

Required:
- Geology 41-42
- English 1-2
- Mathematics 7, 8 or R, 7X, 8
- Social Science 1-2
- Hygiene 11
- Physical Education 1, 2, 3

Choose one:
- *French 3-4
- *German 3-4
- *Spanish 3-4

SOPHOMORE YEAR

Required:
- English 3 and 4 or 5 or 6 or fine arts
- Chemistry 1-2-3
- Geography 38
- Physical Education 4, 5, 6

Choose one:
- *French 21-22
- *German 21, 22
- *Spanish 21-22

## Bachelor of Science in Mathematics

FRESHMAN YEAR

Mathematics 7, 8, 31
Social Science 1, 2
English 1, 2
*French 3-4 or *German 3-4
Hygiene 11
Physical Education 1, 2, 3

SOPHOMORE YEAR

Mathematics 34, 35, 36; or 32, 33, 171
English 3, and 4 or 5 or 6, or elective in fine arts; or two courses in classical language or literature
French or German, two courses, continuing the language begun in the first year
Physics 24, 25; or 34, 35; or Chemistry 1, 2, 3, (or 1, 2, 31), if the two Physics courses are elected in the junior or senior year
Physical Education 4, 5, 6

## Bachelor of Science in Physics

FRESHMAN YEAR

Required:
- English 1-2
- Mathematics 7, 8 or R, 7X, 8
- Social Science 1-2
- Hygiene 11
- Physical Education 1, 2, 3

Choose one:
- *German 3-4 or
- *French 3-4

SOPHOMORE YEAR

Physics 34-35 (or 24-25), 52 or 54
Humanities: Four courses to be selected as shown under Bachelor of Arts, above
Mathematics 31, 32, 33
*German or French 21-22
Physical Education 4, 5, 6

*Students placed in French 1, German 1, or Spanish 1 may complete the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

## Bachelor of Science in Medicine

FRESHMAN YEAR

Required:
- English 1, 2
- Chemistry 1-2-3 or 1-2-31
- Mathematics 7, 8 or R, 7X, 8
- Social Science 1-2
- Hygiene 11
- Physical Education 1, 2, 3

Choose one:
- *French 3-4
- *German 3-4
- *Spanish 3-4

SOPHOMORE YEAR

English 3 and 4 or 5 or 6 or fine arts
*French 21-22
or
*German 21, 22
or
*Spanish 21-22

Elective, 1 course (2 courses if Chemistry 31 is taken in the first year)
Chemistry 31 (if not taken in the first year) and Chemistry 42
Botany 41 and Zoology 41, 42
or
Botany 41 and Physics 24-25
Physical Education 4, 5, 6

NOTE: A third year of undergraduate work is necessary before admission to the School of Medicine. The requirements are Psychology 24, Chemistry 61 and 62, Zoology 41-42, or Physics 24-25, and three elective courses.

## Bachelor of Science in Medical Technology

The requirements for the first two years are the same as in the curriculum leading to the degree of Bachelor of Science in Medicine, except that the first courses in Chemistry should be 1-2-31.

## Bachelor of Science in Public Health

(See page 144.)

## Bachelor of Science in Industrial Relations

Same statement as for the Bachelor of Science in Public Health. (See page 144.)

## Bachelor of Science in Public Health Nursing

(See page 145.)

## Bachelor of Science in Bacteriology

FRESHMAN YEAR

Required:
- Chemistry 1-2-3
- English 1-2
- Mathematics 7, 8 or R, 7X, 8
- Social Science 1-2
- Hygiene 11

Choose one:
- *French 3-4
- *German 3-4

Physical Edcation 1, 2, 3

*Students placed in course number 1 may meet the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language. Pre-medical students are advised to choose French or German.

## SOPHOMORE YEAR

*Humanities*: Four courses to be selected by choosing A, or B, or C below:

A. English and fine arts, two courses:
   English 3, required.
   One of the following: English 4 or 5 or 6; Art 41 or 42 or 43; Music 41.
   Classical language and literature, two courses.

B. English and fine arts, two courses as indicated in A, above.
   French or German or Spanish, two courses.

C. Classical language or literature in the original or in translation, two courses from:
   Greek 1-2; 3-4; 21-22; 31, 61.
   Latin 1-2; 3-4; 21-22; 32, 62.
   French or German or Spanish, two courses.

*Required*:

Chemistry 31, 42
Botany 41
Zoology 41, 42
Bacteriology 51
Physical Education 4, 5, 6

## THE COLLEGE OF ARTS AND SCIENCES

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM SMITH WELLS, Ph.D., *Dean*

GERALDINE ALMA FOSTER, A.M., *Assistant Dean*

ALBERT IRVING SUSKIN, Ph.D., *Adviser*

### *†The Administrative Board

GLEN HAYDON, Ph.D., *Professor of Music* (1950)

ALBERT RAY NEWSOME, Ph.D., *Professor of History* (1950)

MILLARD SHERIDAN BRECKENRIDGE, LL.B., *Professor of Law* (1951)

WILLIAM DOUGALD MACMILLAN, Ph.D., *Professor of English* (1951)

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology* (1952)

EDWIN CARLYLE MARKHAM, Ph.D., *Professor of Chemistry* (1952)

CORYDON PERRY SPRUILL, JR., B.Litt. (Oxon.), *Professor of Economics* (1952)

HOWARD RUSSELL HUSE, Ph.D., *Professor of Romance Languages* (1953)

RICHARD JENTE, Ph.D., *Professor of Germanic Languages* (1953)

LEE MARSHALL BROOKS, Ph.D., *Professor of Sociology* (1954)

CLAIBORNE STRIBLING JONES, Ph.D., *Associate Professor of Zoology* (1954)

WILLIAM HOWARD PLEMMONS, Ph.D., *Professor of Education* (1954)

### General Statement

Students in the College of Arts and Sciences have completed the first two years of college work in this or some other institution of comparable standards. Therefore only the junior and senior years are offered. The work of the College of Arts and Sciences is distributed among three divisions known as the Division of the Humanities, the Division of the Natural Sciences, and the Division of the Social Sciences. At the beginning of the junior year a student expecting to enter the College of Arts and Sciences must choose one of the divisions for his major work. He will then be under the direction of the head

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

of the division and an adviser from the department of his major subject. Those who plan to teach in secondary schools should seek admission to the School of Education. The only students not so placed in divisions will be candidates for the A.B.-LL.B. and the S.B. in Medicine degrees and special students not candidates for any degree. Such students will be directly under the guidance of the Dean of the College.

It is the general understanding that during the junior and senior years a student in a division will take about one-third of his work in one department, one-third in allied departments in the division of his major, and one-third as free electives outside the division. Because of special circumstances, there are variations among the divisions from the numerical aspects of this rule. *It is also understood that a student shall have the right to submit a program of his own, which may be at variance with the regular divisional arrangement, to the head of a division, and, if it is approved by the Advisory Board of the division and the Administrative Board of the College, he may follow it toward the appropriate degree.* The several requirements of the divisions are explained below in the description of the divisions. To be eligible for graduation, a student must secure the grade of C or higher on 30 quarter hours of work in his major. This rule applies to students who began their major after September, 1942. Grades lower than C will not be acceptable in the major for students transferring from other colleges. For a transfer student, the number of hours taken here in the major must carry C's or better in the same ratio as the number 30 is to the total required in the major. It is to be understood that for the student enrolled in the University before September, 1947, one-half of the hours of his academic work must be of grade C or better; for the student entering the University in or after September, 1947, his over-all average grade must be at least C. For method of computing C average see page 115, section on Eligibility for Graduation.

### Preparation for the Study of Law

Students preparing for the study of law may do so in one of the following ways: (1) they may take the regular four-year course leading to the A.B. degree, choosing subjects proper to their purpose; (2) they may take the special courses leading to the A.B.-LL.B.; (3) they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the exact requirements.

### Preparation for the Study of Medicine or of Dentistry

Students preparing for the study of medicine or dentistry should spend as much time in securing a well-rounded cultural education as their age and financial resources permit. If possible they should take the regular four-year course leading to the bachelor's degree. If this is not practicable they may take the special course leading to the S.B. in Medicine or the S.B. in Dentistry (see page 143), or they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the medical or dental schools. In general it seems desirable for students who are *preparing for medicine* by taking courses leading to the bachelor's degree to select either chemistry or zoology as the major field of study, but the completion of a major in another department may still provide adequate preparation. In order to do this he should take courses in the premedical sciences in the first two years in the General College, namely, Chemistry 1-2-3 or 1-2-31; Physics 24-25 or Botany 41 and Zoology 41. In the College of Arts and Sciences he could then follow whatever his interests may direct and still complete adequate and necessary work in biology, chemistry, and physics prerequisite to the medical curriculum.

Because of the widening social and economic interests of the medical and dental professions, students preparing to enter either should take, in addition to the requirements in the sciences, as many courses as possible in history, literature, economics, philosophy, and psychology.

Because there is not sufficient space in the medical and dental schools to admit all students who meet the quantitative standards, and because more than average intelligence and aptitude are required for the statisfactory completion of the medical or dental curriculum, the quality of the student's work is of the greatest importance. All students interested in the study of medicine or dentistry should attempt to stand in the highest third of their academic classes.

### Admission and General Regulations

For regulations governing admission to the College of Arts and Sciences, see page 78.

In exceptional cases provision will be made for students who cannot meet the exact requirements, either to take the needed work here in the General College or to take examinations to prove that they are able to carry the work in the College of Arts and Sciences. In

no case, however, will a degree be conferred without the completion of the full entrance requirements of this University either by examination or by certificate and the completion of the full course as required for the degree concerned.

A student transferring from another accredited college to the College of Arts and Sciences of this University must meet the requirements of the first two years here, unless he presents a superior record from the other college.

If required freshman courses are taken after the student begins his junior year, or if required sophomore courses are taken after he begins his senior year, only half credit is allowed. This does not apply to transfer students, provided they make up their deficiencies as soon as possible.

*There is a requirement that the full work of the last year shall be done in residence at this University.*

### Curriculum Leading to the Bachelor of Arts

To secure the degree of Bachelor of Arts the student must complete fully the requirements set up in the General College for the first two years and follow this by meeting in full the requirements in one of the divisions for the junior and senior years. The requirements for a major in any department will be found with the descriptions of courses offered by that department.

A minimum of thirty-six full courses excluding the requirement in hygiene and physical education is required for the degree; the least number of quarter hours for graduation is 186, including six hours in hygiene and physical education. A student may accumulate the minimum number of courses or hours for graduation but still not have satisfied those requirements in his division that must be met regardless of the total number of courses taken.

### The Divisions

The faculty of the college is divided into three divisions, the Division of the Humanities, the Division of the Social Sciences, and the Division of the Natural Sciences. The work of some departments will be found in more than one division, and, for convenience, that of others may from time to time be shifted from one to another or be placed in more than one; courses in departments listed in more than one division, however, cannot be counted both as allied to the major and as extra-divisional work. A course that is listed in the major de-

partment and another department must count toward the major.

By the end of his freshman year, if possible, the student should decide upon his major subject. In his sophomore year he should take whatever work he can directly prerequisite to his major. In his junior year he enters one of the divisions, and his work is directed by the requirements of the division and by any special needs he may have in conference with the head of the division, or by a person designated for this purpose. Students taking the A.B.-LL.B. course or the S.B. in Medicine curriculum do not fall in any division but are under the direct charge of the Dean of the College of Arts and Sciences.

Allied courses are those which are offered by the departments of instruction which appear in the same division as the department of major interest. Non-divisional courses are those which are offered by the departments of instruction outside the division which lists the department of major interest.

For the requirements of the undergraduate major in any department, see the Description of Courses for the department concerned.

## The Division of the Humanities

BERTHOLD LOUIS ULLMAN, Ph.D., *Chairman*
HARRY KITSUN RUSSELL, Ph.D., *Secretary*

The departments of instruction included in the Division of the Humanities are as follows:

Art
The Classics
Dramatic Art
English
General and Comparative Literature
Germanic Languages
History
Journalism
Music
Philosophy
Radio
Religion
Romance Languages

### GENERAL STATEMENT

After a student has selected his department of major interest, that department must require of him a minimum of six whole quarter courses, or the equivalent in whole and half courses, and may require a maximum of eight such courses. In the allied departments of the division the student must take at least four such quarter courses and may take eight, distributed between at least two departments; not more than four of these divisional courses may be taken within one department. It is required that the student take from departments

in the other divisions at least four and not more than seven whole quarter courses, in all a sufficient number of courses to make a total of at least eighteen whole quarter courses over and above the full requirements of the General College. Special programs may be submitted by students.

### PROGRAM FOR HONORS WORK

A student in one of the departments in the Division of the Humanities may, as the result of distinguished work, be awarded a degree with *Honors* or *Highest Honors.*

I. APPLICATION. At the end of the sophomore year or the beginning of the junior year the student with a good record for courses in the General College may become a candidate for honors by applying to the head of his major department, or to the chairman of the departmental committee on honors, with whom he will confer on a unified program of work. The student who fails to register for honors before the third quarter of his junior year may be admitted to candidacy only upon application to the Advisory Board of the Division.

II. REQUIREMENTS. The candidate for honors is expected to give evidence of ability to do work which in quality and quantity can be judged as outstanding. In addition to a good general knowledge of his major subject he must secure an intensive understanding of that special field which will form the background of his essay. To this end he should do, in term and in vacation, a large amount of reading additional to that assigned in his regular courses. (For reading courses see below, Part IV.) A grade average of B in the major subject will normally be considered as a minimum. The following are the formal requirements for a degree with honors in the Division:

1. *Written comprehensive examination.*
2. *Essay.* This essay, which need not be a piece of original research, must be submitted in typed form by May first of the senior year.
3. *Oral examination.* This examination, one hour in length, will be limited to the student's special field.

All of the honors work must come up to a standard of excellence to be determined by the departmental committee, which shall have charge of the administration of the requirements, and shall have the power to demand that a student return to his regular status. The candidate showing a superlative degree of ability and industry will be awarded *Highest Honors.*

III. ADVISER. To guide him in his reading and in the preparation of his essay a member of the staff of his major department will be assigned the candidate for honors as a special adviser.

IV. EXEMPTION FROM CLASSROOM COURSES. The candidate for honors may receive credit for as many as three reading courses. Such courses, with the exemption from class attendance and the requirements of regular courses, should usually be taken during the first and second quarters of his senior year, though the departmental committee, on the recommendation of the special adviser, will have power to modify such a procedure. Only one of the three reading courses may be taken during the junior year, not more than two of them may be taken during a single quarter, and all three of them must be counted as belonging to the major subject. The candidate who, upon his own initiative or the decision of the departmental committee, abandons working for honors, or who fails to satisfy all the formal requirements for a degree with honors, may receive, with the consent of the departmental committee, credit for the reading courses which he has completed.

## The Division of the Social Sciences

ALBERT RAY NEWSOME, Ph.D., *Chairman*
LEE MARSHALL BROOKS, Ph.D., *Secretary*

This division includes the following departments of instruction:

| | | |
|---|---|---|
| Economics | Philosophy | Psychology |
| Education | Physical Education | Sociology |
| History | Political Science | |

NOTE: Psychology 24-25 may be counted only as natural science.

### GENERAL STATEMENT

This division requires the student to complete a minimum of six whole quarter courses or the equivalent in whole and half courses in his chosen department of major interest. If, however, essential foundation courses in the major department have not been completed in the General College, a maximum of eight such courses may be required in that department. From five to seven courses in allied departments within the Division of the Social Sciences are required, and from departments in the other divisions at least five and not more than seven whole quarter courses, in all a sufficient number of courses to make a total of at least eighteen whole courses over and above the full requirements of the General College.

### PROGRAM FOR HONORS WORK

The program for honors work in the Division of the Social Sciences is substantially the same as that in the Division of the Humanities, above, with the important difference that in the Division of the Social Sciences the candidate for honors may receive credit for only two reading courses.

## The Division of the Natural Sciences

JOHN WAYNE LASLEY, JR., Ph.D., *Chairman*
ARTHUR ROE, Ph.D., *Secretary*

The following departments of instruction are included in the Division:

| | | |
|---|---|---|
| Astronomy | Geology | Physics |
| Bacteriology | Mathematics | Psychology |
| Botany | Philosophy | Zoology |
| Chemistry | | |

### GENERAL STATEMENT

The general requirements in this division are as follows: from six to eight courses, or the equivalent, in the department of major interest; from five to seven courses in allied departments of the Division; and from five to seven courses in departments in other divisions, not to exceed a total of eighteen courses. The dean is authorized to make such adjustments as are necessary in order that a student with a major in science shall not have to take more than the standard number of hours for graduation.

## Academic Curriculum for A.B.-LL.B.

Students who intend to matriculate in the School of Law may plan their courses in such a way as to secure the A.B. and LL.B. degrees in six years instead of the seven years required for the two separately. For the A.B. they must complete, *before matriculation in the School of Law,* the courses outlined below in the General College and the College of Arts and Sciences, with an average of C or better, and, in addition, the first year of law to the satisfaction of the School of Law. The LL.B. degree is then secured by completing the remaining two years of law.

Students pursuing the academic subjects listed in the combined A.B.-LL.B. and B.S.-LL.B. programs are hereby notified that the completion of the required academic courses does not necessarily mean

admission to the Law School. To the extent that limitation of enrollment is necessary, preference will be given to applicants with superior records, considering both the quality and amount of pre-law work.

*English 1, 2, 3, 4
Social Science 1-2
†Mathematics 7-8
Hygiene 11
Physical Education 1, 2, 3, 4, 5, 6
‡Foreign language, four courses
History 71 and 72 or 44 and 45
Economics 31-32
Political Science 41, and one other course in political science
Psychology 24, 25
§Two courses in natural science
English 44, and one other English course, preferably 52
Four elective courses

### Curricula for the Degree of Bachelor of Science

For those students whose interest is in the applied sciences and who wish to enter seriously upon the pursuit of the specialized knowledge and techniques of the sciences, the University offers several curricula leading to the degree of Bachelor of Science. Each of these provides for specialization in a particular science (or in the work of the Medical School or the Dental School), accompanied by the necessary instruction in related fields of science and a minimal requirement of work in English, foreign language, and other non-scientific fields. These curricula, which are designed to furnish the fundamental instruction for some of the technical professions, are eleven in number.

Bachelor of Science in Bacteriology
Bachelor of Science in Chemistry
Bachelor of Science in Dentistry
Bachelor of Science in Geology
Bachelor of Science in Industrial Relations
Bachelor of Science in Mathematics

*English 5 or 6, or a music or art elective, may be substituted for English 4.
†Two courses in Latin or Greek may replace the mathematics requirement, provided the student meets by another language the regular requirement in foreign language.
‡Six courses of a foreign language are required if the student has a language deficiency upon his entrance in the University.
§At least one of these two courses must be chosen from the physical sciences or mathematics.

Bachelor of Science in Medical Technology
Bachelor of Science in Medicine
Bachelor of Science in Physics
Bachelor of Science in Public Health
Bachelor of Science in Public Health Nursing

Requirements for the degrees of Bachelor of Science in Bacteriology, Chemistry, Geology, Mathematics, and Physics are given in the headnotes to the Description of Courses of the departments concerned; and for the degrees in Industrial Relations, Dentistry, Medicine, Medical Technology, Public Health, and Public Health Nursing, immediately below.

### Bachelor of Science in Industrial Relations

After two years in the General College, the student electing the curriculum in industrial relations in the College of Arts and Sciences takes a "core" of eight courses in commerce, economics, psychology, history, and sociology, a major of five courses in education, history, political science, psychology, or sociology, and six elective courses. (In addition to this curriculum detailed below, another program with special emphasis upon economics and commerce is offered by the School of Commerce.)

#### FIRST AND SECOND YEARS

English 1, 2; 3, 4 (or 3 and equivalent of 4 in English or fine arts)
Mathematics 7-8, or 7-9
Natural science: Psychology 24, 25 and two other courses of which at least one must be physical science or mathematics
Modern foreign language: four courses
Social science: Social Science 1-2; Economics 31-32; Political Science 41; Sociology 51 (of these, one or two may be postponed to the junior or senior year.)
Hygiene 11
Physical Education 1, 2, 3; 21, 22, 23

#### THIRD AND FOURTH YEARS

Commerce 51, 71, 155
Economics 191, and 192 or 193
Psychology 133
History 168 or Economics 135
One course in statistics (economics, psychology, or sociology)
Five courses in one of the following: education, history, political science, psychology, sociology
Six courses of electives in natural science or the humanities (history is to be counted among the humanities, unless the five courses are taken in history)

## Bachelor of Science in Medicine or Bachelor of Science in Dentistry

The University recommends that each applicant for admission to its School of Medicine or to its School of Dentistry prepare himself as fully as his age and resources permit. If possible, he should secure a bachelor's degree before beginning his professional study. If this is impracticable, he may secure excellent preparation by completing the academic curriculum outlined below leading to the degree of Bachelor of Science in Medicine and Bachelor of Science in Dentistry. Each degree is conferred upon the satisfactory completion of the first year of work offered in the School of Medicine or the School of Dentistry.

NOTE: Students pursuing the academic subjects listed below are hereby notified that the completion of these courses does not necessarily mean admission to the School of Medicine or of Dentistry. From the rather long list of applicants are chosen those who are deemed the most promising material for admission to the Schools. No arrangement exists for granting the degree of S.B. in Medicine or S.B. in Dentistry for work in any school other than these. Therefore, in order to secure the S.B. in Medicine or S.B. in Dentistry, the student must complete the first year of work offered in the School of Medicine or of Dentistry, and in no other such school. To be eligible for either degree at least the last year of academic work must have been done in this institution.

### FIRST YEAR

Chemistry 1-2-3 or 1-2-31
English 1-2
Mathematics 7-8 or R, 7X-8
Social Science 1-2
French or German, 2 five-hour courses
Hygiene 11
Physical Education 1, 2, 3

### SECOND YEAR

Chemistry 31 (if not taken in first year), 42
*English 3, 4
French or German, 2 five-hour courses following those of first year
Botany 41, Zoology 41, 42; or
Botany 41, Physics 24-25
Elective, 1 course; or 2 courses, if Chemistry 31 was taken during first year

### THIRD YEAR

Psychology 24
Chemistry 61, 62
Zoology 41, 42; or
Physics 24-25
Elective, 3 courses

## Bachelor of Science in Medical Technology

The following courses constitute the program for the degree of Bachelor of Science in Medical Technology:

| | |
|---|---|
| †English (4 courses) | 20 hours |
| ‡French, German, or Spanish (4 courses) | 20 hours |
| Freshman social science (2 courses) | 10 hours |
| Hygiene and physical education | 6 hours |
| Freshman mathematics | 10 hours |

*English 5 or 6, or an art or music elective, may be substituted for English 4.
†An art or music elective may be substituted for the fourth course of English.
‡Lacking adequate credits in foreign language from high school, the student must take six courses in foreign language.

| | |
|---|---|
| Physics 24-25 | 12 hours |
| Chemistry 1-2-31, 42, 61; 146 or 41 or 62 | 31 (or 34) hours |
| Botany 41 | 6 hours |
| Zoology 41, 42, 105 | 18 hours |
| Zoology 110 or Public Health 135 (Parasitology) | 5 or 3½ hours |
| Bacteriology 101 | 8 hours |
| Pathology 52 | 4 hours |
| Elective (not science) | 20 hours |
| Elective (free) | 18 to 20 hours |

At least 30 quarter hours of C or higher are required from the following: chemistry courses numbered above 31, zoology courses numbered above 42, bacteriology and pathology courses.

NOTE: After the completion of this course, a year of practical experience and training in a hospital will be necessary before the student can qualify for the examinations offered by the American Society of Medical Technology.

## Bachelor of Science in Public Health

The curriculum leading to the Bachelor of Science in Public Health has as its objective the broad training of students in the biological and physical sciences which are fundamental for public health workers. The first three years are largely devoted to basic courses in chemistry, physics, mathematics, and biology. In the fourth year the work becomes more specialized and is designed for two groups.

1. *Alternative a:* Biology and Public Health. This curriculum consists largely of biological courses and their application to public health sanitation. Some specialization in sanitary chemistry, bacteriology, parasitology, and malariology is possible. For those who wish to continue on into graduate work this curriculum serves as foundation for graduate work leading toward a Master of Science in Public Health.

2. *Alternative b:* Physical Sciences and Public Health. This curriculum is arranged for those who wish to specialize in industrial hygiene or public health engineering. To a background of fundamental work in surveying, strength of materials, and hydraulics are added courses including those in sanitation, sanitary chemistry, and bacteriology. This program of study is basic for those who wish to prepare for public health engineering work, for a Master of Science in Sanitary Engineering, or for a Master of Science in Public Health.

### FIRST YEAR

*Alternative a or b:* Mathematics 7, 8, 41; Chemistry 1-2-3; English 1, 2; *foreign language, 2 5-quarter-hour courses; Social Science 1-2; Physical Education 1, 2, 3; Hygiene 11.

### SECOND YEAR

*Alternative a:* †English 3, 4; foreign language, 2 5-quarter-hour courses, following those taken in the first year; Physics 24-25; Zoology 41, 42; Botany 41; Mathematics 31, 42.

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*If the student enters the University with a foreign language deficiency, he must take two courses in language before he receives credit on language courses required for graduation.

†English 5 or 6, or an art or music elective, may be substituted for English 4.

*Alternative b:* *English 3, 4; Physics 24-25; Mathematics 31, 32, 33; foreign language, 2 courses, following those taken in the first year, and Botany 1, Zoology 1; or, in place of the foreign language and the freshman courses in botany and zoology, Botany 41, Geology 41, and Zoology 41.

THIRD YEAR

*Alternative a:* Chemistry 31 and 42; Mathematics 51; Zoology 109; Economics 61; English 59; Geology 41; Zoology 112; †Elective.

*Alternative b:* Chemistry 31 and 42; Mathematics 51; Mathematics 121; Mathematics 123; Mathematics 124; Mathematics 42; Economics 61; English 59; †Elective, two courses.

FOURTH YEAR

*Alternative a:* P. H. 111 P. H. Administration; Zoology 106-107-108; P. H. 131 Bacteriology; P. H. 161 Sanitation; P. H. 163, 164 Sanitary Chemistry; P. H. 135 Parasitology; P. H. 133 Malariology; P. H. 134 Medical Entomology; †Elective.

*Alternative b:* P. H. 111 P. H. Administration; P. H. 161 Sanitation; P. H. 131 Bacteriology; P. H. 121 P. H. Statistics; P. H. 162 Sanitary Chemistry; P. H. 135 Parasitology; ‡Math. 125; ‡Math. 126; Math. 61; †Elective (Min. 6 hrs., max., 11 hours are to be taken in School of Public Health.)

## Bachelor of Science in Public Health Nursing

Candidates for this degree must fulfill the following requirements:

1. Satisfactory completion of 90 quarter hours in an accredited college or university. The amount of credit not exceeding 90 quarter hours extended for work in other colleges will be determined by the Committee on Admissions.

   (a) *Required:*

   24 quarter hours in the natural sciences, selected from zoology, botany, chemistry, physics, psychology.

   20 quarter hours in English.

   10 quarter hours in the social sciences, selected from sociology, upper division psychology, history.

   (b) *Electives:*

   The departmental adviser will assist the student in the selection of the remaining courses (36 quarter hours) with reference to her individual needs.
2. Graduation from an approved school of nursing, with credit to be determined by the Committee on Admissions.
3. Satisfactory completion of the curriculum in Public Health Nursing in the School of Public Health at the University of North Carolina.

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*English 5 or 6, or an art or music elective, may be substituted for English 4.

†It is suggested that some of the elective courses be taken from the following: Eng. 44, Zool. 41 and 109, Pol. Sci. 41, 42, and 101, Chem. 61, 62, 63, Physics 120, Math. 125, 126.

‡Elective courses may be substituted for the courses in structures; if this substitution is made, the courses in structures must be taken in the graduate year by candidates for the Master of Science in Sanitary Engineering.

## SCHOOL OF EDUCATION

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

GUY BERRYMAN PHILLIPS, A.B., M.A., *Dean*

### *†The Administrative Board

JOHN NATHANIEL COUCH, Ph.D., Sc.D., *Kenan Professor of Botany* (1950)

J. MINOR GWYNN, Ph.D., *Professor of Education* (1950)

MICHAEL ARENDELL HILL, JR., A.M., *Professor of Mathematics* (1951)

WILL CARSON RYAN, Ph.D., Ed.D., LL.D., *Kenan Professor of Education* (1951)

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education* (1952)

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WILLIAM HOWARD PLEMMONS, Ph.D., *Associate Professor of Education* (1953)

JOSEPH CARLYLE SITTERSON, Ph.D., *Professor of History* (1953)

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science* (1954)

H. ARNOLD PERRY, Ed.D., *Associate Professor of Education* (1954)

### General Statement

The following outline will serve as a guide for students enrolled in the School of Education. A new bulletin has been prepared which will give complete information about the program for the preparation of teachers in elementary education and secondary education. Faculty action on all of the changes was taken after copy for this issue of the catalogue was prepared. In all cases where conflicts between this material and that in the new School of Education bulletin occur the School of Education bulletin is correct.

Undergraduate students who desire to prepare for teaching in the elementary school or in the secondary school will be admitted to the School of Education in accordance with the admission procedure outlined in the bulletin of the School of Education.

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

Each student will follow the program of courses in education outlined for the elementary certificate and the secondary certificate. In addition he will select courses in his major field of concentration to meet the requirements for graduation from the University and general certification requirements.

Certification may be secured in the fields of art, elementary education, English, French, Latin, library science, mathematics, music, natural science, physical education, Spanish, social science. With the advice of the department concerned (or division in the cases of natural science and social science) the student follows one of the programs for a major. Students are advised to select a second or minor program in one of the fields listed above, or in dramatic art, and especially to make such combinations of major and minor as will best prepare them for the integrated high school programs that are developing in North Carolina and other states.

Students are urged to consult the Dean of the School of Education or his representative about questions involving the preparation of teachers for the public schools.

The following courses in education are required of all students to meet the requirements for certification in North Carolina: Education 41, 71, 99, one course in materials and methods, one course in directed teaching and one elective in Education which in most cases will be a second course in practice teaching.

### ART

Students who choose to teach art will complete an art major reduced by one studio course and one Art History course.

Pre-major work in General College: (choose three) studio half-courses 44, 45, 46, 48, 49, 80, 81, 84, 110; (choose two) Art History 41, 42, 43.

Students who choose a second teaching field in art will take two Art History courses (including 41 or 42 or 43), and the following studio half-courses: 44, 45, 46, 49, 50, 55, and two electives.

### DRAMATIC ART

Students who choose a minor program in dramatic art will take the following courses:

Dramatic Art 63
Dramatic Art 64
Two of the following: 155, 161, 162

### ENGLISH

Students who choose a major program in English will take:

(a) English 50
(b) English 96
(c) English 81 and 82
(d) English 40 (or specially designed course)
(e) One of the following: English 84, 88, or 89, 94 (or 104ab), 97, 98
(f) One of the following: English 70 (or 103ab), 83, 91, 93, 125
(g) One elective in English

Students who choose a minor program in English will take:

(a) English 81
(b) English 50
(c) One of the following: English 88, 84 or 141, or by permission one of the following: English 70, 83, or 131, 99, 125
(d) One of the following: English 52, 53, 54, 96, or by permission an elective.

### FRENCH

Students who choose a major program in French will take the following courses:

French 51
French 52
French 71
French 72
French 126
French 145
French 50 (when required), or 109, or 192.

Those choosing a minor program will take:

French 50 (when required), or 51; 71; 72; and 145.

French 50 is required of all students whose knowledge of grammar is considered unsatisfactory.

### LATIN

Students who choose a major program in Latin will take the following courses:

Latin 71
Latin 51 or 52

and four additional courses, one of which may be a course requiring no work in the Latin language, from the following: Latin 62, 76, 101, 102, 103, 104, 105, and 112.

Those who choose a minor program will take:

Latin 71
Latin 51 or 52
Two additional courses.

### LIBRARY SCIENCE

Students who choose a major program in library science will take the following courses:

Library Science 94
Library Science 95
Library Science 96
Library Science 122
Library Science 123
Library Science 143

Students who choose a minor program will take:

Library Science 94 and 123 (each as a three-quarter-hour course)
Library Science 122
Library Science 95
Library Science 143

### MATHEMATICS

Students who choose a major program in mathematics will take the following courses:

Mathematics 31
Mathematics 32
Mathematics 33
Mathematics 103

and additional courses in mathematics to make a total of thirty quarter hours. It is recommended that the latter be selected from Mathematics 51, 52, 102, 131.

Those who choose a minor program will take twenty quarter hours from the major programs.

### MUSIC

Students whose major for the A.B. degree is in music, and who desire to qualify for teaching, should plan their work so as to include, in addition to the regular courses in the major, the courses in educa-

tion listed above. The student desiring to specialize in instrumental music should include at least two courses, selected according to his major instrument.

Those who choose a minor program in music will take the following:

Music 1
Music 14
Music 47 and 48 or any two from Music 54, 55, 56
Three quarter hours instruction in voice.

### NATURAL SCIENCE

Attention is called to the program designed to prepare the student who desires the degree of Bachelor of Science in Science Teaching. The course requirements of the General College are to be met, as well as those of the School of Education noted immediately above. Also three of the following sequences must be completed:

Botany 41, 42
Chemistry 1-2-3, or 1-2-31
Geology 41 and Geography 38, or Geology 41, 42
Physics 24-25
Zoology 41, 42

Courses taken while the student is in the General College may count towards satisfying this requirement, but at least two courses in the three sequences chosen must be passed with a grade of C or better. In addition, the student must complete with a grade of C or better four other courses from the natural sciences. These four courses, plus those needed to complete a total of 186 quarter hours, should be selected after consultation with the adviser in the department or departments of natural science concerned.

### HEALTH AND PHYSICAL EDUCATION

Students who choose a major program in health and physical education will take the following courses: Physical Education 75, 76, 77, 78, 79, 86, 87.

Men who choose a major program should take the following courses: Physical Education 65, 66, 67, 68, 69, and 70.

Women who choose a major program should take the following courses: Physical Education 54, 55, 56, 57, 58, and 59.

All those who take a minor program in physical education should take Physical Education 77, 78, 86, Education 63, and one from the following: Physical Education 65, 66, 67, 68, 69, or 70.

### SOCIAL SCIENCE

As prerequisite to either the major or minor program in social science, and to satisfy certain basic certification requirements, all students must have the following courses or their equivalent: Social Science 1-2, History 21, 22, and Political Science 41. It is recommended that these courses be completed by the end of the sophomore year. The student who chooses a major program may then pursue either of the following plans:

(1) A major of 6 or 7 courses in one of the following departments in the Division of the Social Sciences as prescribed by that department: Economics, History, Political Science, or Sociology and Anthropology; or

(2) A major in social science consisting of the following courses or their equivalent: Economics 61 or 31-32, two five-hour courses in history of junior-senior rank, Sociology 101 (except in case of out-of-state students who may substitute Sociology 53), and Sociology 51 and either 122 or 181.

Students who choose a minor program will take the prerequisite work mentioned under the major program and three additional courses selected from any of the following fields: economics, history, political science, or sociology.

### SPANISH

Students who choose a program in Spanish will take the following courses:

Spanish 50
Spanish 51
Spanish 52
Spanish 71
Spanish 72
Spanish 145
One elective

Those choosing a minor program will take:

Spanish 50; 51; 71; and 145.

## *THE SCHOOL OF COMMERCE

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

†DUDLEY DEWITT CARROLL, M.A., *Dean*

‡THOMAS H. CARROLL, B.S., M.B.A., D.C.S.

JOHN BROOKS WOOSLEY, Ph.D., *Chairman, Graduate Studies and Research*

MILTON S. HEATH, Ph.D., *Chairman, Committee on the Library*

REX S. WINSLOW, Ph.D., *Director of Bureau of Business Services and Research*

GUELDA ELLIOT VON BECKERATH, A.B., *Librarian*

GLADYS COX, *Recorder*

ANNE HERNDON ROGERS, A.B., *Secretary*

### §The Administrative Board

DUDLEY DEWITT CARROLL, M.A., *Professor of Economics and Dean of the School of Commerce*

||JAMES WILLIAM FESLER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*

RICHARD J. MENDENHALL HOBBS, A.B., LL.B., *Professor of Business Law*

ALMONTE CHARLES HOWELL, Ph.D., *Professor of English and Secretary of the Faculty*

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish*

ERLE EWART PEACOCK, M.B.A., C.P.A., *Professor of Accounting*

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*

HARRY D. WOLF, Ph.D., *Professor of Economics*

JOHN BROOKS WOOSLEY, Ph.D., *Professor of Economics and Chairman of Graduate Studies and Research*

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*On February 6, 1950, by action of the Board of Trustees, the name of the School of Commerce was changed to the School of Business Administration, effective September 1, 1950.

†Resigned as dean, effective August 31, 1950. After that date, Dean Carroll will be Professor of Economics and Dean Emeritus of the School of Business Administration.

‡Appointed dean, effective September 1, 1950.

§The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

||On leave 1949-1950.

## General Statement

Though courses of instruction in economics and in certain business subjects had been offered for many years in the University of North Carolina, not until 1919 was there established a comprehensive, well-organized business curriculum. In that year the legislature, in conformity with the recommendations of the President and the Board of Trustees, enacted the legislation which resulted in the immediate organization of the School of Commerce. The School occupies a place in the University organization which is coordinate in standing and equipment with the College of Arts and Sciences.

The undergraduate course of study, leading to the degree of Bachelor of Science in Commerce, covers a period of four years and is designed to give a foundation of broad and general culture and, at the same time, supply a definite and practical training to those who intend to engage in any of the great lines of industrial and commercial activity. For those desiring more intensive specialization, the Graduate School offers the degree of Master of Science in Commerce.

## Aim and Purpose

The phenomenal industrial development of the South in recent years has produced an imperative need for trained businessmen. The School of Commerce in a large sense is the expression of the University's desire to serve this special need of its own particular section. To this end substantial support has been accorded the School by both the University and the state as a whole. In consequence the School has been provided with a large and able corps of instructors with quarters in Bingham Hall.

It is the purpose of the School of Commerce to provide its students with as thorough and scientific business training as it is possible to give within the range of the subjects which it attempts to cover. Its teaching policy assumes that such training should consist not only of the requisite understanding of the principles and methodology which govern the organization and administration of typical business enterprises, but, in addition, of an understanding of the problems and the larger relationships of the economic organization as a whole. In his attempt to master the technical and the vocational aspects of business, the student will not be permitted to lose sight of the social and the cultural.

### Teaching Policy

Wherever possible, the plan is followed of presenting the subject matter of the various courses from the point of view of the executive, always bearing in mind that the executive's field of interest includes the broad outside relationships as well as the internal administration of his business. Adherence to this common point of view prevents confusion in the mind of the student and enables him to place the problems and practices of business in their true perspective.

Within the short space of time at his disposal it is impossible for the student to investigate in detail the entire field of business. It is, therefore, the policy of the School of Commerce to supplement the general survey which is required of every student with a more intensive study of that portion of the field which is of especial interest to him. To this end there have been prepared for the student certain groupings of closely related courses. The groupings have been made in such a way as to correspond to certain major functions which must be performed in the successful administration of a business enterprise.

These functions may be designated as follows: (1) production; (2) finance; (3) marketing and selling; (4) management of personnel; (5) risk and insurance; (6) accounting; (7) statistics.

### Scope of Specialization

Specialization in the manner here indicated, however, does not begin until the senior year, except in the accounting, marketing, and merchandising groups. The School of Commerce accepts the principle that a broad and thorough training in fundamentals, as well as some maturity of mind, should precede any high degree of specialization. Whether the educational process be viewed as a training of the mental faculties, or as the acquisition of a fund of knowledge, it is equally imperative that the materials of study be definite and compact. Arrangement and treatment must be so designed as to assure results which are cumulative and which have continuity of direction.

To this end the undergraduate curriculum of the School of Commerce is arranged in logical sequence, with the same requirements imposed upon virtually all candidates for degrees until the senior year is reached. During his freshman and sophomore years in the General College the student is required to follow a path of study which closely parallels the liberal arts course. The first year's work includes English composition, mathematics, social science, economic

geography, biological science, and a *modern language. In the second year are courses in general economics; in English and American literature; in natural science; and an election of courses from business organization, accounting, general psychology, American federal government, and a continuance of the chosen modern language.

In his junior year the student devotes most of his time to required courses in economics, commerce, psychology, and government, which include money and banking, business organization, accounting, economic statistics, general psychology, and American federal government.

In the senior year specialization begins through the election by the student of his preferred group of courses from the list outlined above. It is to be noted that the freedom to elect does not apply to courses regarded singly, but only to courses as they are arranged in more or less standardized groups. Having chosen a given group, the student is expected to satisfy its requirements in full unless a substitute program has been submitted to and approved by the Administrative Board of the School.

## Importance of Graduate Study

From the preceding survey of the undergraduate curriculum it is apparent that those students who are desirous of securing the benefits of thorough specialized training and intensive research work should continue in the University for at least one year of graduate study.

The Administrative Board of the School strongly urges the advisability of such an additional year for the superior student. Equipped with his undergraduate training, unburdened of the formal routine of courses which have been preparatory in nature, the graduate student is free to concentrate his full powers upon the subject of his choice. His attitude changes from one of receptivity and acquiescence to one of active inquiry and initiative. He is charged with the responsibility of finding new materials and new arrays of facts, and of subjecting them to his own independent analysis, to the end that new relationships may be discovered or new evaluations made. His initiative, his analytical and creative powers, and his quality of persistence are tested and developed to a degree impossible of attainment in the undergraduate years.

*A written test of reading knowledge of one modern foreign language is a requirement in the School of Commerce. This reading test may be taken upon completion of the freshman language course or at the end of any succeeding quarter at the option of the student. A grade of B or better in the last term of freshman language or any later course is accepted as evidence of a reading knowledge of the language. A student may take additional language for credit.

The Graduate School is prepared to offer graduate instruction and facilities for graduate research in the fields indicated by the senior study groups. Courses have been developed exclusively for graduate students. They are designed primarily for the encouragement and guidance of research activity, and in consequence are conducted informally and on a basis of close personal contact between professor and student.

### Graduate Degrees

The School of Commerce offers through the Graduate School the graduate degree of Master of Science in Commerce. Candidates for this degree must either hold an undergraduate degree in business from an approved institution or have the equivalent of an undergraduate major in economics and business subjects, including the essential undergraduate prerequisites.

The Department of Economics and Commerce offers through the Graduate School the degree of Doctor of Philosophy. It is possible under this arrangement to take a major in either field and a minor in the other.

Graduates of other institutions desiring to enter as candidates for higher degrees should submit their records, together with application for entrance, to the Dean of the Graduate School.

The conferring of the degree of Master of Science in Commerce assumes as a minimum the completion of eight full courses or their equivalent as approved by the Dean, a residence period of at least one year, and the completion of a thesis which embodies the results of original research on the part of the student. (For further details see the catalogue of the Graduate School.)

### Naval R.O.T.C.

A regularly organized unit of the Naval R.O.T.C. is maintained at the University. Among the programs of training provided is one in the Supply Corps leading to a commission as ensign in that branch of the service as well as to a degree of Bachelor of Science in Commerce. For information concerning this program, see page 165.

### Special Students

There are many young people already in business who feel the need of additional special training but who are unable to spend the full four years at the University, or who cannot provide proper entrance credits. Recognizing this, the School of Commerce will admit

students of twenty-one years of age or over who cannot fulfill the entrance requirements, as special students, but not as candidates for degrees. Such students must supply satisfactory evidence of their ability to profit from the courses. Such evidence must include testimonials from former employers certifying to the term, nature, and quality of their work. A personal interview with the Dean is also recommended. Veterans of World War II will also be admitted as special students if they are approved by the Veterans' Administration as qualified to do work at the college level. Special students are admitted on probation.

### Library Facilities

In addition to the facilities afforded by the general library of the University, the School of Commerce is equipped with its own special collection of materials. In the latter are contained a large number of the economic and business publications of recent years which may be of value to the student. An annual fund of about $7,000 assures that the collection will be well maintained and kept up-to-date.

Especially noteworthy is the collection of periodical publications. Most of the important periodicals in the general field of business and finance are regularly received. In addition, the School of Commerce is a regular subscriber to over fifty trade journals and to the statistical services of Moody, Brookmire, Gibson, the Babson Institute, and the Standard Statistics Company. The Harvard and Cambridge Economic Surveys also are provided.

A full-time librarian is in charge and is prepared to aid students in the collection of such materials for research work as may not be currently available in the University. Special library privileges are accorded graduate students who have access to the stack rooms and private desk space.

### Lectures and Observation Trips

Students are expected to take advantage of the frequent opportunities to hear lectures offered by prominent businessmen who are invited to the University for this purpose. These lectures will prove of great value to the student in furthering his acquaintance with the practical aspects of business.

From time to time the classes in business subjects make visits to neighboring factories and other types of business institutions for the purpose of making first-hand studies of organization and administrative methods.

### Business Clinics

In addition to formal lectures, the School from time to time arranges for recognized business leaders to come to the University for informal discussion of current business problems in their respective fields. The virtue of this arrangement is that the informal discussion of problems in a particular field will give the student a clearer understanding of the actual everyday aspects of business.

### The Bureau of Business Services and Research

The Bureau of Business Services and Research is an agency of the School which cooperates with the University Extension Division, the Institute of Industrial Relations, private business firms, foundations, and trade associations in organizing and extending the services and facilities of the School of Commerce beyond the boundary of the campus.

The Bureau acts as a general clearinghouse for requests from North Carolina business and industry seeking assistance in the solution of business problems. It administers adult educational projects such as short courses, institutes, and workshops for business executives both on the campus and in North Carolina towns and cities. The Bureau acts as consultant for business firms and associations seeking to establish research and training programs requiring university-grade educational services. It organizes consultant services and schedules speakers from the staff of the Department of Economics and Commerce and cooperates with the placement office in filling the needs of business and industry for University-trained men and women.

See the section of this catalogue devoted to the Extension Division for details of adult education projects conducted by the School.

### The Business Foundation

In July, 1946, the Business Foundation of North Carolina was established. Its articles of incorporation provided: "The objects and purposes for which the corporation is formed are to aid and promote, by financial assistance and otherwise, all types of education, service and research for business and industry at or through the School of Commerce and other departments of the University of North Carolina. . . ." The funds of the corporation now amount to over a million dollars, with definite prospects for large additions to this endowment. The funds will add greatly to the effectiveness of the School of Commerce both by enabling the School to command a more competent staff and by providing facilities for research in the business problems and procedures of this region.

### Stenography

No credit toward the degree is given for stenography, but every student is urged to acquire facility in the use of it before graduation. Instruction in this subject is not offered by the University but can be secured in Chapel Hill in a private school.

### Standards of Work

The School was admitted to membership in the American Association of Collegiate Schools of Business in 1923. This is an organization formed for the promotion of thoroughgoing, scientific training for the business profession. It maintains high standards of membership based on the number and training of the faculty, the thoroughness of the work, the length and breadth of the curriculum, the number of students, the financial backing of the school, and the facilities for carrying on the work.

### Student Habits

Training for business, if it is to be worthy of the name, should include at least two elements: first, an understanding of the principles and processes of business; and second, the practice of habits of work essential to business success. Observation appears to justify the conclusion that promptness, industry, systematic application, and honest performance are quite as vital to mastery in the business world as an understanding of the nature of industrial and commercial phenomena. It is wasteful, then, to allow students to proceed far in this field if they are unwilling to fashion their habits in conformity with these essential requirements. The policy of the School will be to drop from its rolls any student who, after a reasonable time, fails to respond to the above standards. Attendance on classes and promptness and regularity in performing assigned work are judged in terms of the above principle.

### Fellowships and Assistantships

Two teaching fellowships, each of a value of $750 plus free tuition in the Graduate School, are awarded annually in the Department of Economics and Commerce. The recipients may be called on to do teaching or other duties in the department not exceeding one-third of their time. Applications should be made prior to March 1.

The Ernest H. Abernethy Fellowship in Southern Industry, of an annual value of $750 plus free tuition, was established in 1944. The

holder is required to do research in an industry of importance to the South and to prepare a thesis as a result of the study.

A number of graduate and undergraduate assistantships are awarded each year. The duties consist of grading papers, conducting laboratories, construction of charts, and so forth.

### Societies

Beta Gamma Sigma, recognized by the American Association of Collegiate Schools of Business as the national scholarship fraternity in Commerce and Business, maintains a chapter, Alpha of North Carolina, at the University. Those students who rank scholastically in the highest 10 per cent of the senior class and the highest 2 per cent of the junior class are eligible for membership in this organization.

### Admission

For the requirements for admission to the School of Commerce, see page 78. For the subjects covered in the first two years see page 129.

### Curriculum Leading to the Degree of Bachelor of Science in Commerce

The degree of Bachelor of Science in Commerce will be conferred upon students who complete any one of the following curricula with an average of C or better on the four years' work.

In order that the junior and senior subjects may be chosen in such a way as to constitute a coherent and comprehensive whole, rather than an unrelated and scattered series, the following programs have been devised. Each student is expected to elect at the beginning of his junior year the group which best serves his needs and to adhere to it. However, students whose interests do not coincide with any of the following groups are invited to submit an alternative program for the approval of the Administrative Board of the School.

The following courses are required of all juniors and seniors in the School of Commerce (all electives must receive the approval of the Dean):

| | | |
|---|---|---|
| All of these which were not elected in the sophomore year. | Commerce 51 | Business Organization |
| | Commerce 66 | General Psychology |
| | Commerce 71 | Principles of Accounting |
| | Polit. Sci. 41 | Government in the United States |

| | |
|---|---|
| Economics 81 | Principles of Money and Banking |
| Economics 170 | Economic Statistics |
| Commerce 72 | Principles of Accounting (continued) |
| *Commerce 91-92 | Business Law |

| | | |
|---|---|---|
| Choose one: | Economics 135 | Economic History |
| | Economics 191† | Introduction to the Labor Problem |
| | Economics 195 | Theories of Economic Reform |
| | Economics 197 | Government and Business |

The following additional courses are required of students choosing the major fields listed below:

## I. Banking and Finance

| | |
|---|---|
| Economics 141 | Public Finance |
| Economics 185 | Business Cycles |
| Commerce 181 | Advanced Banking |
| Commerce 191 | Corporation Finance |
| Commerce 192 | Corporate Financial Problems |
| Commerce 195 | Investments |

4 electives outside the Department of Economics and Commerce
2 electives in the Department of Economics and Commerce

## II. Accounting

| | |
|---|---|
| Commerce 171 | Advanced Accounting I |
| Commerce 172 | Advanced Accounting II |
| Commerce 173 | Cost Accounting |
| Commerce 175 | Auditing |
| Commerce 177 | Income Tax Procedure |
| Commerce 151 | Principles of Industrial Management |
| or | |
| Commerce 191 | Corporation Finance |

4 electives outside the Department of Economics and Commerce
2 electives in the Department of Economics and Commerce

## III. Statistics

| | |
|---|---|
| Economics 171 | Statistical Inference and Quality Control |
| Economics 172 | Time Series and Index Numbers |
| Economics 173 | Correlation Analysis |
| Commerce 191 | Corporation Finance |
| ‡Mathematics 31, 32, 33 | Second Year Mathematics |
| Mathematics 111 | Elementary Mathematical Statistics |

or a course in Mathematical Statistics approved by the Dean.
1 elective outside the Department of Economics and Commerce
3 electives in the Department of Economics and Commerce

*To be omitted in the Foundation for Law curriculum.
†Required in Personnel Management program. Another course in the group must be chosen.
‡If Mathematics 31, 32, 33 were elected in the sophomore year, three non-divisional elective courses approved by the Dean may be substituted.

## IV. Marketing, Merchandising, and Advertising

Economics 124 ..... Principles of Marketing
Commerce 161 ..... Advertising
Commerce 163 ..... Advanced Course in Marketing
Choose two:
- Commerce 165 ..... Retail Distribution
- Commerce 167 ..... Sales Management
- Commerce 168 ..... Sales and Market Analysis

4 electives outside the Department of Economics and Commerce
3 electives in the Department of Economics and Commerce

## V. Production Management

Commerce 151 ..... Principles of Industrial Management
Commerce 154 ..... Production Management: Theories and Practices
Commerce 155 ..... Personnel Management
Commerce 157 ..... Time and Motion Study
Commerce 158 ..... Production Management Problems
Commerce 173 ..... Cost Accounting
4 electives outside the Department of Economics and Commerce
2 electives in the Department of Economics and Commerce

## VI. Personnel Management

Commerce 151 ..... Principles of Industrial Management
Commerce 155 ..... Personnel Management
Commerce 156 ..... Personnel Problems
Commerce 159 ..... Employment and Training Procedures
Economics 191 ..... Introduction to the Labor Problem
Psychology 181 ..... Laboratory Analysis in Personnel Psychology
3 electives outside the Department of Economics and Commerce
3 electives in the Department of Economics and Commerce

## VII. Insurance

Economics 124 ..... Principles of Marketing
Economics 185 ..... Business Cycles
or
Economics 191 ..... Introduction to the Labor Problem
Commerce 121 ..... Life Insurance
Commerce 122 ..... Property Insurance
Commerce 123 ..... Casualty Insurance
Commerce 124 ..... Advanced Life Insurance
Commerce 191 ..... Corporation Finance
4 electives outside the Department of Economics and Commerce
1 elective in the Department of Economics and Commerce

## VIII. *Foundation for Law

Economics 141 ..... Public Finance
Economics 151 ..... Transportation
or
Economics 153 ..... Public Utilities

*Students in this group omit Commerce 91-92 (Business Law).

| | |
|---|---|
| Economics 191 | Introduction to the Labor Problem |
| Commerce 177 | Income Tax Procedure |
| Commerce 191 | Corporation Finance |
| Political Science 81 | American State Government |
| Political Science 134 | County Gov. and Administration |
| English 44 | Public Speaking |
| or | |
| English 51 | Advanced Composition |
| Philosophy 91 | Philosophy of the State |
| or | |
| *History 71-72 | American History |

5 electives in the Department of Economics and Commerce

## IX. Industrial Relations Curriculum

(This covers all courses in the junior and senior years.)

| | |
|---|---|
| Commerce 71-72 | Principles of Accounting |
| Commerce 91 | Business Law |
| Economics 81 | Money and Banking |
| Economics 170 | Economic Statistics |
| Economics 191 | Introduction to the Labor Problem |
| Economics 192 | Labor and Social Control |
| Economics 193 | History of the Labor Movement |
| Commerce 151 | Principles of Industrial Management |
| Commerce 154 | Production Management |
| Commerce 155 | Personnel Management |
| Commerce 156 | Personnel Problems |
| Sociology 51 | Introduction to Sociology |
| History 168 | Economic History of the U. S., II |
| Psychology 133 | Methods in Social Psychology |

Course in Labor Law in Law School

3 electives outside the Department of Economics and Commerce

Psychology 24-25 may be substituted for Commerce 66 in the sophomore year. If this is done, the non-divisional electives are reduced to two (2)

## X. Commerce-Radio

| | |
|---|---|
| Commerce 151 | Industrial Management |
| or | |
| Commerce 155 | Personnel Management |
| Commerce 161 | Advertising |
| Commerce 191 | Corporation Finance |
| Economics 124 | Principles of Marketing |
| Radio 70 | Introduction to Radio |
| Radio 72 | Continuity Writing |
| Radio 75 | Radio Production |
| Radio 81 | Advanced Dramatic Production |
| Radio 83 | Program Planning |

3 electives in the Department of Economics and Commerce

*If History 71-72 is chosen, electives in the Department of Economics and Commerce are reduced to four (4).

## XI. General

Commerce 151 ..... Principles of Industrial Management
or
Commerce 155 ..... Personnel Management
Commerce 191 ..... Corporation Finance
Economics 124 ..... Principles of Marketing
5 or 4 electives outside the Department of Economics and Commerce
4 or 5 electives in the Department of Economics and Commerce

## XII. Combined Course in Commerce and Law

The University offers a combined curriculum which leads to the degree of Bachelor of Science in Commerce at the end of four years and LL.B. at the end of six years.

The academic curriculum which must have been entirely completed before the student enters the School of Law is as follows:

### FRESHMAN YEAR

Required:
- Botany 1 or Zoology 1 and Geography 38
- English 1, 2
- Social Science 1-2
- Mathematics 7, 9 or R, 7X, 9
- Hygiene 11
- Physical Education 1, 2, 3

Choose one:
- *French 3-4
- *Spanish 3-4
- *German 3-4

### SOPHOMORE YEAR

Required:
- English 3 and 4 or 5 or 6 or elective in fine arts
- Economics 31-32
- Economics 41
- English 44
- Physical Education 4, 5, 6

Choose two:
- Botany 41, 42
- Chemistry 1-2-3
- Geology 41, 42
- Mathematics 31, 32
- Physics 24-25
- Zoology 41, 42

Choose three:
- Political Science 41
- Commerce 51
- Commerce 66
- Commerce 71

### JUNIOR YEAR

All of these which were not elected in the sophomore year:
- Commerce 51 ..... Business Organization
- Commerce 66 ..... General Psychology
- Commerce 71 ..... Principles of Accounting
- Pol. Science 41 ..... Government in the U. S.

Commerce 72 ..... Principles of Accounting (continued)
Economics 81 ..... Principles of Money and Banking
Economics 170 ..... Economic Statistics

Choose one:
- Economics 135 ..... Economic History
- Economics 191 ..... Introduction to the Labor Problem
- Economics 195 ..... Theories of Economic Reform

2 electives outside the Department of Economics and Commerce
3 electives in the Department of Economics and Commerce

*See note on language requirement at bottom of page 155.

Upon completion of the above program (of three years) with a C average or better the student enters the School of Law. The degree of Bachelor of Science in Commerce is conferred at the end of the fourth year (first year in law) provided the student has passed all the work of the first year of law to the satisfaction of the School of Law.

## XIII. R.O.T.C. Program for Naval Supply Corps

A student who completes this program receives a commission as ensign, U. S. Navy (Supply Corps), as well as the degree of Bachelor of Science in Commerce.

### FRESHMAN AND SOPHOMORE YEARS

English 1, 2, 3 and 4 or 5 or 6
Mathematics 7, 8
Modern foreign language 3-4
(Student must make a grade of B or above on French, German, or Spanish 4, or pass the reading test)
Social Science 1-2
Physics 24-25
Economics 31-32
Economics 41
Political Science 41
Naval Science 101-102; 201-202
Naval Science Drill
Hygiene 11

### JUNIOR AND SENIOR YEARS

Commerce 51
Commerce 66
Commerce 71, 72
Commerce 91-92
Commerce 151
Commerce 191
Economics 81
Economics 124
Economics 170
Economics 191
2 electives in the Department of Economics and Commerce
Naval Science 301-302
Naval Science 401s-402s-403s

## XIV. Special Program in Business Management in the Furniture Industry

### FIRST YEAR—ALL STUDENTS

* (State College in Raleigh)

| | |
|---|---|
| English 101, 102, 103 | 9 quarter hours |
| Mathematics 101, 102, 103 | 14 quarter hours |
| Chemistry 101, 102, 103 | 12 quarter hours |
| World History, C.C. 101, 102, 103 | 9 quarter hours |
| Engineering Drawing 101, 102, 103 | 6 quarter hours |
| Military Science 101, 102, 103 | 6 quarter hours |
| Fundamental Activities and Hygiene | 3 quarter hours |

### SECOND YEAR

* (State College in Raleigh)

| | |
|---|---|
| English Literature 261, 262, 263 | 9 quarter hours |
| †Modern Language 201, 202, 203 | 9 quarter hours |

*For details of courses at State College see State College catalogue.
†Passing of a reading knowledge examination is necessary to the satisfaction of the language requirement.

| | |
|---|---|
| Physics 211, 212, 213 | 12 quarter hours |
| Machine Shop, M.E. 227, 228, 229 | 3 quarter hours |
| Wood Structure and Identification, For. 201 | 3 quarter hours |
| Textiles 108 | 3 quarter hours |
| Woodworking Equipment, M.E. 132 | 3 quarter hours |
| Furniture Manufacturing and Processing, I.E. 328 | 4 quarter hours |
| Gluing and Plywood, For. 322 | 3 quarter hours |
| Log and Lumber Grades and Specifications, For. 321 | 3 quarter hours |
| Military Science 201, 202, 203 | 6 quarter hours |
| Sports Activities | 3 quarter hours |

### THIRD YEAR

(University in Chapel Hill)

| | |
|---|---|
| Economics 31, 32 | General Economics |
| Economics 41 | Resources and Industries |
| Economics 81 | Money and Banking |
| Commerce 51 | Business Organization |
| Commerce 71, 72 | Accounting Principles |
| Economics 170 | Economic Statistics |
| Commerce 66 | General Psychology |
| Political Science 41 | United States Government |

### FOURTH YEAR

(University in Chapel Hill)

| | |
|---|---|
| Economics 124 | Marketing |
| Commerce 167 | Sales Management |
| Economics 191 | Labor Problems |
| Commerce 155 | Personnel Management |
| Commerce 191 | Corporation Finance |
| Commerce 151 | Industrial Management |
| Commerce 154 | Production Management |
| Commerce 91-92 | Business Law |

1 elective outside the Department of Economics and Commerce

This is part of a comprehensive training program conducted jointly by the School of Commerce and the School of Engineering in Raleigh. Twelve weeks of summer employment in a furniture factory is a requirement for graduation. For details of this program see special bulletin.

## THE GRADUATE SCHOOL

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*
ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*
WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., LL.D., *Dean*
ARNOLD KIMSEY KING, A.M., *Associate Dean*

### *†The Administrative Board

WILLIAM DEBERNIERE MACNIDER, M.D., Sc.D., LL.D., *Kenan Research Professor of Pharmacology* (1951)
EDGAR WALLACE KNIGHT, Ph.D., *Kenan Professor of Education* (1951)
JOHN BROOKS WOOSLEY, Ph.D., *Professor of Economics* (1950)
BERTHOLD LOUIS ULLMAN, Ph.D., *Kenan Professor of Classical Languages and Literatures* (1951)
FLETCHER MELVIN GREEN, Ph.D., *Kenan Professor of History* (1950)
HAROLD HOTELLING, Ph.D., *Professor of Mathematical Statistics* (1952)
GEORGE SHERMAN LANE, Ph.D., *Kenan Professor of Germanic and Comparative Linguistics* (1952)
CLIFFORD PIERSON LYONS, Ph.D., *Professor of English* (1953)
DONALD PAUL COSTELLO, Ph.D., *Kenan Professor of Zoology* (1953)
URBAN TIGNER HOLMES, JR., Ph.D., Litt.D., *Kenan Professor of Romance Philology* (1954)
GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science* (1954)
RALPH WALTON BOST, Ph.D., *Smith Professor of Chemistry* (1954)

### General Statement

The Graduate School finds its province in the fostering of research, in training students to become investigators and teachers in special fields of learning, in the application of research methods to the problems of society, government, and industry, and in supplying opportunity for further and advanced study by those who have already completed a college course. The University of North Carolina has been interested in research for more than a century and has made contributions in science, the social sciences, and the languages. Through its research clubs and learned journals, as well as through publications and other contributions to learning made by members of its faculty,

*The Chancellor is an ex officio member of the Board.
†Dates indicate expiration of terms.

the University has acquired the authority to give advanced instruction. For this it is competent from the standpoint both of the personnel of its faculty and of the material equipment in libraries and laboratories.

Instruction leading to the master's degree was offered at this institution prior to the American Civil War, and such higher degrees were granted in course. Formal action with high standards in requirements was taken in 1876 to establish a system of graduate, as distinct from undergraduate, instruction. The first doctor's degree was awarded in 1883. A Graduate Bulletin, issued in 1885, showed that nearly all departments offered advanced courses. The number of students during those years was small, but the work accomplished in both the humanities and the sciences was of distinguished quality. Given distinct status in 1903 and the leadership of a dean, the Graduate School has experienced steady and, since 1920, rapid growth.

The institution is a member of the Association of American Universities. The Graduate School annually publishes a bulletin, entitled *Research in Progress,* which records analytically the scholarly contributions of the faculty and graduate students. The School operates an Appointments Bureau, which supplies facilities for placement.

Work for advanced degrees is under the supervision of the graduate faculty. Under authority delegated by the graduate faculty, the immediate direction of the Graduate School is in charge of an Administrative Board, of which the Dean is chairman. Special requirements and regulations made by this board are outlined in the catalogue of the Graduate School, which is published annually and is recognized as the official publication of the Graduate School.

### Curricula and Degrees

The degrees under the supervision of the graduate faculty are the Master of Arts (A.M.), Master of Science (S.M.), and Doctor of Philosophy. Degrees of Master of Arts or Master of Science are offered in the fields of anatomy, anthropology, art, bacteriology and immunology, biological chemistry, botany, chemistry, classics, comparative literature, dramatic art, economics and commerce, education and physical education, English, geology and geography, Germanic languages, history, mathematical statistics, mathematics, music, pharmacology, pharmacy, philosophy, physics, physiology, political science, psychology, Romance languages, social work, sociology and rural sociology, and zoology, and in the special curricula in comparative linguistics, folklore, industrial relations, and personnel administration. The degree of Doctor of Philosophy is offered in the fields of

anatomy, biological chemistry, botany, chemistry, classics, comparative literature, economics and commerce, education, English, geology and geography, Germanic languages, history, mathematical statistics, mathematics, music, pharmacy, philosophy, physics, physiology, political science, psychology, public health, Romance languages, sociology, and zoology, and in the curricula in comparative linguistics and industrial relations. Minor programs for the doctorate may be obtained in anthropology and in the curricula in folklore and personnel administration.

Professional graduate degrees are offered in art (M.A. in Creative Art), education (M.A. in Education), library science (Master of School Librarianship), music (Master of Music), public health (Master of Science in Public Health, Master of Public Health, Master of Science in Sanitary Engineering, and Doctor of Public Health), regional planning (Master of Regional Planning), and social work (Master of Science in Social Work).

### The Curriculum in Comparative Linguistics

The Administrative Committee: The Dean, *Chairman;* Professor Lane, *Secretary;* Professors Boggs, Eliason, Holmes

In this curriculum the facilities available within the University for the study of comparative linguistics and philology are organized. It is possible for students to submit programs of study in this subject leading to the degrees of Master of Arts and Doctor of Philosophy. It is also possible for those with majors in language to secure a minor in comparative linguistics.

### *The Division of Public Welfare and Social Work

The Administrative Committee: The Dean, *Chairman;* Professor Fink, *Director;* Professors Odum, S. H. Hobbs, Jr., Woosley, Crane, Berryhill, Wright, Blackwell, King

The work offered by the Division of Public Welfare and Social Work leads (1) to a certificate in Social Work; (2) to the degree of Master of Science in Social Work.

The certificate in Social Work requires the successful completion of three quarters of instruction and correlated field work within the "Basic Eight" curriculum recommended by the American Association of Schools of Social Work.

*On February 6, 1950, by action of the Board of Trustees, the Division of Public Welfare and Social Work was made the School of Social Work, with Arthur E. Fink as dean. This change will be effective September 1, 1950.

For the degree of Master of Science in Social Work a minimum of six quarters is required. At least nine courses must be chosen from those approved by the Graduate School for the degree of Master of Arts. The selection of these courses must conform to the general rules of the Graduate School as to major and minor grouping. The same principle shall be applied, in so far as practicable, to the selection of other courses.

Application for admission should be made as far as possible in advance of the academic year. Since field work placements are limited in number and must be arranged in advance of the student's arrival, early application for admission is desirable. Application should be directed to the Director of the Division of Public Welfare and Social Work.

The applicant for admission to the Graduate School to pursue studies in the Division of Public Welfare and Social Work leading to the degree of Master of Science in Social Work must have received a bachelor's degree from a college or university of recognized standing with eighteen semester hours in anthropology, economics, history, political science, psychology, and sociology, at least six semester hours of which must have been in advanced courses in one of these fields. The student deficient in these requirements may be admitted to courses at the discretion of the Division but must remove the deficiencies before being eligible for admission to candidacy for a degree.

The applicant is requested to consult the special catalogue of the Division of Public Welfare and Social Work, which is available upon request.

## The Curriculum in Folklore

Administrative Committee: The Dean, *Chairman;* Professors Boggs, Holmes, Hudson, Jente.

The facilities of the University available in such departments as English, Germanic Languages, Music, Romance Languages, and Sociology have been mobilized in the interest of students who desire to undertake a major or a minor in folklore. A candidate for the A.M. degree may secure a major and a candidate for the Ph.D. degree may secure a minor in that subject.

### The Curriculum in Public Health

Administrative Committee: The Dean, *Chairman;* Dean McGavran, *Director;* Professors MacNider, Bost, Woosley.

This curriculum, leading to both master's and doctor's degrees, has been authorized by the Administrative Board of the Graduate School. For information consult the Catalogue of the Graduate School and the special bulletin of the School of Public Health.

### The Curriculum in Industrial Relations

Administrative Committee: The Dean, *Chairman;* Professor Wolf, *Director;* Professors Calhoun, Dashiell, Herring, King, and Wager

This curriculum is based on the concept of industrial relations as an area in itself. It is selected from the course offerings of the School of Law and the School of Commerce, and from the departments of Economics, Sociology, Political Science, Psychology, and Education. The graduate major leading to the degrees of Master of Science in Industrial Relations and Doctor of Philosophy is in the area of Industrial Relations rather than in a single department. Definite areas of specialization within the several departments, however, may be selected for concentrated study. When pertinent to the individual graduate program, the minor may be selected from more than one department. In all instances a common content of essential courses selected from the offerings of the several departments is required.

### The Curriculum in Personnel Administration

Administrative Committee: The Dean, *Chairman;* Professor Wager, *Secretary;* Professors Wolf, Dashiell, Ellis, Jocher, King.

This curriculum mobilizes the instructional resources having relation to personnel administration which have developed in the departments of Economics and Commerce, Education, Political Science, Psychology, Social Work, and Sociology. Opportunities are afforded qualified students to select programs of study which cut across departmental lines. Students may also choose definite areas of specialization within the respective departments which provide programs of concentrated study.

## Summary of the Requirements for Higher Degrees

### MASTER'S DEGREES

1. A bachelor's degree from a recognized institution.
2. A minimum period of three quarters of resident study.
3. A reading knowledge of one modern foreign language. (But see the catalogue of the Graduate School.)
4. Nine graduate courses, six of which must be in the department of the major.
5. A written examination in the field of the major.
6. An oral examination covering the entire field of study.
7. A thesis.

### DOCTOR OF PHILOSOPHY

1. Admission is the same as for the master's degree.
2. A minimum of three years of graduate study, at least one of which must be at the University of North Carolina.
3. A reading knowledge of French and German. (But see catalogue of the Graduate School.)
4. A major covering adequately the field of major interest and at least six courses in a minor, which may under special circumstances be in the same department.
5. A preliminary oral examination.
6. A written examination in the field of major interest.
7. An oral examination covering the entire field of study.
8. A dissertation.

## Catalogue of the Graduate School

For information concerning the graduate faculty, fields of research, fellowships and other aids, expenses and tuition, and for regulations governing courses of study, credits, admissions, examinations, and higher degrees, reference must be made to the special catalogue of the Graduate School.

## THE SCHOOL OF LAW

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

HENRY P. BRANDIS, JR., A.B., LL.B., *Dean*

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FREDERICK BAYS MCCALL, A.B., LL.B., *Professor of Law*

MAURICE TAYLOR VAN HECKE, Ph.B., J.D., *Professor of Law*

ROBERT HASLEY WETTACH, M.A., LL.B., S.J.D., *Professor of Law*

### General Statement

The School of Law, now in its one hundred and fifth year and with a regular faculty of ten, offers a three-year course leading toward the degrees of LL.B. and J.D. It is on the approved list of the North Carolina and New York Boards of Law Examiners, and of the American Bar Association. It is a member of the Association of American Law Schools and is one of thirty of the leading law schools of the country in which a chapter of the honorary society of the Order of the Coif has been established.

While greater emphasis is placed upon North Carolina decisions, statutes, and practices than upon those of other states, legal materials are studied as a part of the Anglo-American common-law system. Thus the school prepares its students for practice in North Carolina and in other states.

Candidates for admission to the School of Law must have completed, with a C average, a minimum of three years of a regular college curriculum leading to a standard degree. If this work has followed the combined degree program offered by the College of Arts and Sciences or

by the School of Commerce of this University, the student may receive the bachelor's degree in Arts or in Commerce, as the case may be, upon the satisfactory completion of the first year in law. Students pursuing the academic subjects listed in the combined A.B.-LL.B. or S.B.-LL.B. programs are hereby notified that the completion of the required academic courses does not necessarily mean admission to the Law School. To the extent that limitation of enrollment is necessary, preference will be given to applicants with superior records, considering both the quality and amount of pre-law work. Though, as indicated above, students may be admitted to the School of Law on the completion of a minimum of three years of college work, the School recommends completion of the work for a degree before entering upon the study of law.

A program of study required for first-year law students has been arranged to begin in the fall semester of each year. Beginning students will be admitted only once a year, in September. In exceptional cases, students with advanced standing from other law schools may be admitted at the beginning of any term.

The curriculum covers a period of three annual sessions, but this time may be shortened by attendance during summer sessions.

The School of Law is located in Manning Hall. The Law Library, in charge of two trained law librarians and a staff of assistants, now numbers approximately 62,500 volumes.

The students of the School of Law are regularly enrolled in the University, enjoy all the privileges of University students, and are amenable to all general University regulations and to the special regulations of the School.

The summer session of the School of Law offers opportunities for students to supplement the work of the regular year by additional courses, some of which are not otherwise available, or to shorten the period of study for the law degree. A full curriculum is provided for advanced students. The summer faculty normally includes as visiting professors a number of distinguished law teachers from other universities.

Opportunities for individual work are afforded to especially qualified students through membership upon the student editorial staff of the *North Carolina Law Review,* as faculty research assistants, and as library assistants.

For further information, please write to the Dean of the School of Law for the separate bulletin of that school.

## THE SCHOOL OF MEDICINE

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

WALTER REECE BERRYHILL, A.B., M.D., *Dean*

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### Committee on the Library

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HAROLD JOSEPH MAGNUSON, M.D., M.P.H.

LYTT IRVINE GARDNER, M.A., M.D.

WILLIAM CHARLES GIBSON, B.S.

MARVIN LEROY GRANSTROM, B.S.

ANNIE PICKARD, A.B., A.B.L.S., *Acting Librarian*

*The Chancellor, the Director of Admissions and the Dean of Students are ex officio members of the Board.

## General Statement

The School of Medicine was established in 1879 under the direction of Dr. Thomas W. Harris. A course in theoretical and practical medicine was offered under the preceptorial system, but the plan was found impracticable and was abandoned in 1886. In 1890, a more orderly and logical arrangement of the subjects in the medical course having developed, it became possible for an institution without clinical facilities to offer instruction in the pre-clinical subjects, and the school was reopened with Dr. Richard H. Whitehead as Dean and Professor of Anatomy. Under his guidance it soon won recognition for thoroughness of instruction and excellence in scholarship and has since continued without interruption to its growth. At first the course covered only one year, but in 1896, the medical course having been extended in the better class of schools to four years, a two-year course was inaugurated. In 1900 the School of Medicine was incorporated as an integral part of the University and was reorganized to meet the requirements of the first two years of the full four-year course leading to the degree of Doctor of Medicine. In 1902 it was expanded into a four-year school, and the clinical subjects of the third and fourth years were offered in Raleigh under the direction of Dr. Hubert A. Royster as Dean. After a few years of successful operation, this plan had to be abandoned for lack of financial support, and the clinical years were discontinued.

The School has been a member of the Association of American Medical Colleges since 1908 and is on the approved list of schools of basic medical sciences as published by the Council on Medical Education and Hospitals of the American Medical Association.

The curriculum is similar to that in the first two years of the better four-year medical schools in the country. It covers all the pre-clinical or laboratory subjects of the four-year course in medicine, as well as introductory clinical courses in the last two quarters of the second year. These courses in medicine, physical diagnosis, clinical pathology, surgery, and obstetrics serve to lessen the abruptness of the change from the laboratory situation to the clinical.

The School has an arrangement with Watts Hospital in Durham whereby the ward and dispensary patients are available for teaching purposes in the clinical courses. The clinical material at the State Hospital in Raleigh, the State Tubercular Sanatorium at Sanatorium, and the patients in the Tri-County Health Clinic are available for teaching purposes.

Students who have successfully completed the two-year course in this school are given full credit for all of their work and are transferred

into the third year of American medical colleges of the highest rank, from which they receive the degree of Doctor of Medicine. During the past ten years students who have completed their two years in this school have been transferred to thirty different four-year medical colleges from McGill in the North to Tulane in the South, and from Harvard in the East to the University of California in the West.

Approximately 25 per cent of the physicians now in active practice in North Carolina received the first two years of their medical training here.

### Preparation and Requirements for Medicine

Students preparing for the study of medicine should spend as much time securing a well-rounded cultural education as their age and financial resources permit. If possible they should complete the regular four-year course leading to the A.B. or S.B. degree. If this is impracticable they may take the special course leading to the S.B. in Medicine, or they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the School of Medicine. This last method of preparation is not recommended.

*Three years of accredited college work (96 semester hours) are required for admission.* This period of study should include: eight or more semester hours of inorganic chemistry (qualitative and quantitative analysis); eight semester hours of organic chemistry; eight semester hours of biology; eight semester hours of physics (which must have required trigonometry as prerequisite); English—such knowledge as is ordinarily required of candidates for a degree in an approved college (usually the courses required of freshmen and sophomores); four to six courses in a modern foreign language (French, German, or Spanish), depending upon credits presented for entrance to college. In addition, courses in volumetric quantitative analysis, comparative anatomy, vertebrate embryology, modern physics, and physical chemistry are strongly recommended.

Rarely are students admitted who have completed only the minimal requirements unless their academic records are of outstanding excellence. It is especially advised that all students present more work in chemistry and zoology than the minimal requirements outlined above.

*Because of the widening social and economic interests of the medical profession, students preparing to enter it should take in addition to the requirements in the sciences as many courses as possible in history, literature, economics, philosophy, and psychology.*

There is not sufficient space in the medical schools to admit all students who meet the quantitative standards. For this reason, and because it requires more than average intelligence and aptitude to complete satisfactorily the medical curriculum, the quality of the student's undergraduate work is of the greatest importance. All students interested in the study of medicine should attempt to stand in the upper third of their academic classes.

While a high grade of scholarship is probably the best criterion for predicting achievement in medical school, the personal qualifications of applicants are of the highest importance. Moral character is the most important prerequisite for entering the medical profession. No school wishes to train prospective physicians who lack either ethical standards or a sense of social responsibility.

*All admissions are decided by a special committee on admissions, after approval of credentials by the Director of Admissions. The maximal number admitted to the first-year class is fifty-six. The special committee reserves the right to select from the entire list of approved applicants those who in their judgment are best qualified for the study of medicine.*

Candidates for admission to the second year of the medical curriculum must present certificates from an accredited medical school stating that they have had the required fifteen units, at least three years of college work as indicated above, and have completed the subjects of the first year of the medical course as outlined.

## The Medical Curriculum

The medical curriculum covers two years divided into six periods, or quarters, of approximately equal length. It is organized into six departments: Anatomy, Bacteriology and Immunology, Biological Chemistry and Nutrition, Pathology, Pharmacology, and Physiology, with additional courses in medicine, physical diagnosis, principles of surgery, and obstetrics, and an affiliated School of Public Health. For description of the courses and other details see the catalogue of the Medical School.

## The Expansion of the Medical School

The General Assembly of 1947 provided funds for the construction of a four-hundred-bed teaching hospital, nurses' home and training school, and intern and resident quarters, and authorized the expansion of the two-year school into a four-year school as a part of a gen-

eral state-wide program for better hospitalization and medical care in North Carolina.

The contract for the University Hospital was let in September, 1949, and it is anticipated that construction will be completed by the fall of 1951. Other buildings in the expansion program, including a one-hundred-bed tuberculosis hospital, should be ready for occupancy and operation on that date. More definite announcements will be made later in regard to the date instruction will begin for the first junior class.

## THE SCHOOL OF DENTISTRY

William Donald Carmichael, Jr., S.B. Comm., *Controller and Acting President of the University of North Carolina*

Robert Burton House, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

Henry Toole Clark, Jr., A.B., M.D., *Administrator of the Division of Medical Affairs*

John Charles Brauer, A.B., D.D.S., M.Sc., *Dean*

### Executive Board of the Division of Medical Affairs

Henry Toole Clark, Jr., A.B., M.D., *Administrator of the Division of Medical Affairs*

Walter Reece Berryhill, A.B., M.D., *Dean of the School of Medicine*

John Charles Brauer, A.B., D.D.S., M.Sc., *Dean of the School of Dentistry*

Robert Ervin Coker, Ph.D., *Kenan Professor of Zoology*

Marion Lee Jacobs, Ph.D., *Dean of the School of Pharmacy*

Edward Grafton McGavran, A.B., M.D., M.P.H., *Dean of the School of Public Health*

### General Statement

While considerable thought had been given by the North Carolina State Dental Society to the organization of a School of Dentistry, even as early as 1921 in the appointment of the first dental college committee, it was not until 1947 that a basic dental survey of North Carolina was authorized by the Society. The General Assembly of 1949, having studied the findings and recommendations of the survey, appropriated funds for the establishment of a School of Dentistry.

The new building of the School of Dentistry is to be an integral part of the total building program of the Division of Medical Affairs. The architects now are working with the plans for the new dental building. Construction already is under way for the four-hundred-bed teaching hospital, nurses' dormitories and nursing school, and the intern and resident quarters.

Dentistry in North Carolina has been given a signal opportunity to make a contribution to the health sciences in its close working relationship with medicine and the other schools of the Division. Students of dentistry and medicine will attend comparable basic science courses, and they will be required to meet equally high academic

standards in all areas. Accordingly, students of dentistry will be selected on a basis of having the same minimum entrance requirements as those for medicine. While the standards for admission to the School of Dentistry at the University of North Carolina are somewhat in excess of the minimum required by the Council on Dental Education of the American Dental Association, such requirements are deemed advisable for the pattern of education and training designed.

The first class in the School of Dentistry will begin in the fall of 1950, and the total number to be selected will be limited to forty students. Until the new dental buildings are completed, which should be accomplished during 1951, the pre-clinical technical instruction will be done in temporary quarters, and most of the instruction in the pre-clinical subjects will be provided in the facilities and departments of the medical school. Following the completion of the building, a maximum of fifty students will be selected each year, consistent with the requirements for dentists in North Carolina. Priority in selection of students will be given to residents of North Carolina, and, secondly, to residents of the Southeastern states.

**Preparation for Study of Dentistry and Requirements for Admission**

Students preparing for the study of dentistry should spend as much time securing a well-rounded cultural education as their age and financial resources permit. If possible they should complete the regular four-year course leading to the A.B. or S.B. degree. If this is impracticable they may take the special course leading to the S.B. in Dentistry, or they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the School of Dentistry. This last method of preparation is not recommended.

**Requirements for Admission**

Three years of accredited college work (96 semester hours) are required for admission. This period of study should include eight or more semester hours of inorganic chemistry (qualitative and quantitative analysis); eight semester hours of organic chemistry; eight semester hours of biology; eight semester hours of physics (which must have required trigonometry as a prerequisite); English—such knowledge as is ordinarily required of candidates for a degree in an approved college (usually the courses required of freshmen and sophomores); four to six courses in a modern foreign language (French, German,

or Spanish), depending upon credits presented for entrance to college. In addition, courses in volumetric quantitative analysis, comparative anatomy, vertebrate embryology, modern physics, and physical chemistry are strongly recommended.

Because of the widening social and economic interests of the dental profession, students preparing to enter it should take, in addition to the requirements in the sciences, as many courses as possible in social science, history, literature, economics, philosophy, and psychology.

There is not sufficient space in the dental schools to admit all students who meet the quantitative standards. For this reason, and because it requires more than average intelligence and aptitude to complete satisfactorily the dental curriculum, the quality of the student's undergraduate work is of the greatest importance. All students interested in the study of dentistry should attempt to stand in the upper third of their academic classes.

### Personal Qualifications

While a high grade of scholarship and digital dexterity are probably the best criteria for predicting achievement in dental school the personal qualifications of applicants are of the highest importance. Moral character is the most important prerequisite for entering the dental profession. No school wishes to train prospective dentists who lack either ethical standards or a sense of social responsibility.

### Dental Curriculum

The curriculum for the first-year students of dentistry will consist of the subjects: Anatomy (Gross), Histology, Biochemistry, Physiology, Oral Physiology, Dental Anatomy, Dental Materials, Dentistry and Society, Dental Statistics, and Physiological Hygiene.

## THE SCHOOL OF PHARMACY

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

MARION LEE JACOBS, Ph.D., *Dean*

### *The Administrative Board

DUDLEY DEWITT CARROLL, M.A., *Professor of Economics and Dean of the School of Commerce*

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RALPH WALTON BOST, Ph.D., *Smith Professor of Chemistry*

IRA WINFIELD ROSE, Ph.G., *Professor of Practical Pharmacy*

EDWARD ARMOND BRECHT, Ph.D., *Professor of Pharmacy*

HERMAN ORA THOMPSON, Ph.D., *Associate Professor of Pharmacy*

### General Statement

In 1880 Dr. Thomas W. Harris was instrumental in establishing a School of Pharmacy at the University in connection with the School of Medicine. The school was continued until the resignation of Doctor Harris in 1886, when it was abandoned. In 1890 the school was revived by Dr. Richard H. Whitehead, but again its career was short. Finally, in March, 1897, in response to urgent requests made by the pharmacists of the state, the present school was established, and Edward Vernon Howell was appointed Professor of Pharmacy and Dean.

The School in 1925 obtained exclusive use of its present building, Howell Hall of Pharmacy. This building contains 35 rooms and 22,000 sq. ft. of floor space.

The minimal offerings of the School are based on four years of study which lead to the degree of Bachelor of Science in Pharmacy (S.B. in Phar.).

The School, fully accredited by the American Council on Pharmaceutical Education, was admitted to membership in the American Association of Colleges of Pharmacy in 1917. This organization was formed for the promotion of thorough scientific work in the profession of pharmacy. It maintains high standards for membership based on

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

the number and training of the faculty, the thoroughness of the work offered, the quality of the curriculum, the number of students, the financial support of the school, and the facilities for carrying on the work.

The School is fully accredited by all state examining boards.

Candidates for admission are received by certificate from accredited schools or by examination. Each application for admission must be passed upon and approved by the Director of Admissions of the University before the application can be considered by the Committee on Admisssions of the School of Pharmacy. Beginning students and transfer students are accepted in September only. Applications should be filed as early as possible.

The School of Pharmacy is compelled to limit the number of beginning and transfer students.

The School of Pharmacy recognizes that its graduates may elect to pursue one or another of related but definitely different forms of pharmaceutical practice and has provided such specialized training.

Graduate degrees offered by the School of Pharmacy are administered by the Graduate School of the University of North Carolina. These degrees are Master of Science (S.M. in Phar.) and Doctor of Philosophy (Ph.D.). The three majors available are pharmacy, pharmaceutical chemistry, and pharmacognosy.

A student who has completed one or more years of accredited work in a recognized school of pharmacy and submits satisfactory evidence of having completed the entrance requirements and courses equivalent to those prescribed in the curriculum required for the degree of S.B. in Pharmacy may be admitted with advanced standing and proceed for this degree. The minimum requirement of residence for a degree is a period of three quarters within the period of twelve months. A full year's work comprising at least forty-five quarter hours must be completed by a transferring student. Beginning January 1, 1938, the American Association of Colleges of Pharmacy has required of its member colleges that students transferring from a non-pharmaceutical college must spend a minimum of three years in a standard college of pharmacy in order to be graduated with a degree of S.B. in Pharmacy.

For further information, please write to the Dean of the School of Pharmacy for the special catalogue of that school.

## THE SCHOOL OF PUBLIC HEALTH

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

### *The Administrative Board

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean*

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MARK VICTOR ZIEGLER, M.D., *Regional Medical Director, Region 3, Bureau of Health Services, Public Health Service*

JOHN BROOKS WOOSLEY, Ph.D., *Professor of Economics*

WILL CARSON RYAN, Ph.D., LL.D., *Kenan Professor of Education*

### General Statement

In 1936 a Division of Public Health was established and a director appointed. The University of North Carolina, at Chapel Hill, was then designated by the United States Public Health Service as the center for training of health officials for the Interstate Sanitary District No. 2 (extending from Delaware to Florida), to carry out the provisions of the Social Security Act for the training of public health personnel.

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

The Division of Public Health was given the status of a School of Public Health in 1940 and graduate degrees were offered.

A Department of Public Health Nursing was organized in 1941. In September, 1942, a Department of Health Education was established, in 1946 a Department of Public Health Nutrition, in 1948 a Department of Field Training, and in 1949 a Department of Biostatistics. The School enjoys the distinction of being one of the ten in North America whose M.P.H. programs are accredited by the American Public Health Association.

The School of Public Health enjoys the active cooperation of the State Department of Health at Raleigh. Members of the staff give exercises in their special fields, and the students have the opportunity to see the practice and study the methods and material of an efficient state health organization at first hand.

Cooperation is also maintained with Duke University and its hospital, as well as with Watts Hospital, in Durham. Furthermore, the school enjoys the cooperation of the local health officers at Durham and Chapel Hill who, through lectures and practical demonstrations, give the student an opportunity to see the health work of a city and county government; here, as well as at Raleigh, opportunity is offered for special study and investigation of health problems.

Similarly, cooperation is maintained with the United States Public Health Service, the Children's Bureau, and other federal health agencies, members of which participate through lectures and discussions.

For county and city health work, field demonstration units have been established in fourteen city, county, and district health departments in North Carolina and nine other states in the Southeastern region.

Students are enrolled in the University of North Carolina and enjoy all the rights and privileges of the graduate student body. They may take courses in other departments of the University provided they are properly qualified and have the approval of the Administration. Certain courses in economics, political science, sociology, social work, education, public speaking, and statistics are regarded as having an especially close relationship to public health.

The Administration reserves the right to refuse admission to any student who, in its judgment, is not qualified to profit by work in the Graduate School, to limit the number of students admitted to any course, and to drop from the roll any student whose work it deems unsatisfactory for any reason. All applicants for admission will be assumed to have assented to these conditions.

The School of Public Health is in the same building with the School of Medicine, with which it maintains close cooperation. Academically, it clears through the Graduate School, and those interested are advised to consult the Graduate School catalogue.

Graduate degrees offered in the School of Public Health are Master of Science (S.M.), Doctor of Philosophy (Ph.D.), and the following professional graduate degrees: Master of Science in Public Health (M.S.P.H.), Master of Public Health (M.P.H.), Doctor of Public Health (Dr.P.H.), and Master of Science in Sanitary Engineering (M.S.S.E.).

All requirements concerning these degrees are administered by the faculty of the School of Public Health with the approval of the Administrative Board of the Graduate School.

The Certificate in Public Health (C.P.H.) and Certificate in Public Health Nursing (C.P.H.N.) are not considered graduate degrees and are, therefore, administered by the faculty of the School of Public Health.

An undergraduate degree, Bachelor of Science in Public Health Nursing, is awarded graduate nurses who comply with all requirements of the public health nursing course and who have had the required years and courses in college. In addition there is a four-year program leading to the degree of Bachelor of Science in Public Health. Both of these degrees are administered by the College of Arts and Sciences.

For more detailed information and proposed curricula leading to degrees see the special catalogue of the School of Public Health.

## THE SCHOOL OF LIBRARY SCIENCE

WILLIAM DONALD CARMICHAEL, JR., S.B. Comm., *Controller and Acting President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

SUSAN GREY AKERS, Ph.D., *Dean*

### *The Administrative Board

SUSAN GREY AKERS, Ph.D., *Professor of Library Science and Dean of the School of Library Science*

EDWARD ALEXANDER CAMERON, Ph.D., *Professor of Mathematics*

LUCILE KELLING, A.B., B.L.S., *Professor of Library Science*

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish*

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education*

CHARLES EVERETT RUSH, A.B., A.M., B.L.S., *Director of Libraries and Professor of Library Science*

HARRY KITSUN RUSSELL, Ph.D., *Professor of English*

LOUIS ROUND WILSON, Ph.D., Litt.D., L.H.D., *Professor of Library Science*

### General Statement

The School of Library Science opened in September, 1931, as a unit of the University of North Carolina. Made possible by a grant from the Carnegie Corporation, it is the culmination of a series of library science courses offered in the summer and regular terms since 1904. The School is accredited by the American Library Association and the Southern Association of Colleges and Secondary Schools.

The curricula of the School offer a basic course preparing the student for beginning positions in any type of library and a special master's program for school librarians. Other master's programs are being planned, and it is hoped that they can be offered for the academic year, 1951-1952.

Quarters for the School, comprising laboratory and classrooms for the students and offices for the faculty, are in the University Library.

The town school system maintains a high school library and an elementary school library available for observation. Within driving

*The Chancellor, the Ditector of Admissions, and the Dean of Students are ex officio members of the Board.

distance of from thirty minutes to two hours are the State Library; the Library Commission headquarters; the school and public library systems of Durham, Raleigh, and Greensboro; and the libraries of Duke University, the North Carolina State College of Agriculture and Engineering, and the Woman's College of the University of North Carolina.

The principal requirement for admission is a bachelor's degree from an accredited college or university.

Applicants are expected to have received a grade of B (90 per cent or better) in at least 50 per cent of their undergraduate work. An applicant's college degree may not be approved if his course included an undue proportion of vocational or professional subjects such as library science, education, home economics, or agriculture. For certain library positions thorough training in one of these or in some other field is essential, but it should be in addition to rather than as part of his undergraduate preparation.

Applicants must show evidence of ability to do library work and must have had a well-balanced selection of courses leading to the required bachelor's degree. A reading knowledge of modern languages is essential to satisfactory work in many types of libraries and very desirable in others. Latin is important as a basis for other languages. The class will be chosen on a basis of individual promise of success.

For definite recommendations on the content of the preparatory work see the special catalogue of the School of Library Science.

Students must have reasonable ability in typewriting before admission to the School.

Those over thirty-five years of age are advised not to apply for admission to the School unless they have been continuously engaged in professional library work in a well-organized library or in some similar pursuit.

It is required that applicants be interviewed by a member of the faculty of the School or a librarian designated by the School.

Certain courses are open to advanced undergraduates in the College of Arts and Sciences. They are listed under Department of Library Science in this catalogue at page 281.

Applicants should plan their entrance into the School at the beginning of the fall quarter or summer session. Many courses have prerequisite work which cannot be taken unless the curriculum is begun at one of these times.

The courses of the regular session are repeated in the summer session. The same requirements apply as in the regular session.

Nine courses must be satisfactorily completed in residence in the University of North Carolina for a degree in library science. Students who are admitted with advanced standing in library science must complete in the School or in another division of this institution an equivalent number of courses approved by the Dean.

The residence requirement for a degree is three academic quarters. This requirement must be completed within six years.

On the completion of a curriculum in the School of Library Science, the University will grant the degree of Bachelor of Science in Library Science or Master of School Librarianship.

The present demand for professional librarians is unusually great. Requests are received almost daily from various types of libraries in different parts of the country for recommendations for all sorts of positions. Although the School cannot guarantee positions for its graduates, it assists them not only in securing their first positions, but in advancing to other positions later.

Application for admission to the School for either the regular session or the summer session should be made as far as possible in advance of the session to be attended. Application should be made on forms which are secured from the *Dean, School of Library Science, The University of North Carolina, Chapel Hill, N. C.*

For detailed information see the special catalogue of the School.

*Part Four*

# ACADEMIC DEPARTMENTS

## DESCRIPTION OF COURSES

In this section are listed and described all courses offered in the regular sessions of the University except those in the professional schools of Law, Medicine, Dentistry, Pharmacy, Public Health, and Library Science, and the Division of Public Welfare and Social Work. For courses in these schools see the special bulletins.

The requirements for majors are shown, after the faculty lists, in connection with the materials concerning the various departments.

The work of the University, except in the School of Law, is arranged and offered on the quarter system, the regular session being divided into three approximately equal parts called the fall, winter, and spring quarters. The summer session is divided into two terms.

Work is valued and credited toward degrees by quarter hours, one such hour being allowed for each class meeting a week for a quarter, laboratory or field work counting one hour for each two hours of work in laboratory or field, and work in studio (art) counting one hour for each three hours. In the following announcements of courses the numbers in parentheses following the descriptive titles show the credits allowed in quarter hours. Except in the case of courses meeting regularly five times a week, the number of actual hours a course meets will be found in the description of the course. The meetings of a few advanced courses, however, are arranged by the professor in charge.

In the event that required freshman subjects are taken after a student begins his junior year or required sophomore subjects after he begins his senior year, such subjects carry half credit only.

Courses numbered from 1 through 99 are for undergraduates only; those numbered from 100 through 199 are for advanced undergraduates and graduates; those numbered from 200 to 400 are for graduates only. Courses in chemistry for undergraduates are grouped by decades under the headings inorganic, analytical, organic, etc. Undergraduates may not take courses numbered above 200 except by special permission of the instructor in the course and the head of the department. Permission must also be secured from the Dean of the Graduate School and the dean of the college involved. Courses numbered from 1 to 100 carry no credit toward any advanced degree.

## DEPARTMENT OF AIR SCIENCE AND TACTICS

Professor: JESSE J. MOORHEAD, *Lieut. Colonel, USAF*
Assistant Professors: ARDEN S. FREER, *Major, USAF*; NOEL CARPENTER, *Captain, USAF*; WILLIAM M. SANFORD, *Captain, USAF*
Instructor: EVAN W. EVANS, *T/Sgt., USAF*
Administrative: LEROY T. EURE, *1st/Sgt., USAF*
Supply: VIRGIL T. LARKIN, *T/Sgt., USAF*

### General Information

The Air ROTC unit constitutes a regular department of instruction within the University. It is known as the Department of Air Science and Tactics. Academic credits toward degrees are allowed, as in other departments.

#### AIR FORCE COMMISSIONS

Opportunity will be given outstanding students to request commissions in the regular Air Force if they so desire. Others may request extended active duty as reserve officers for periods of from one to three years and receive flying training during such active duty periods.

#### EMOLUMENTS

Advanced students (3rd and 4th year) are allowed a monetary allowance in lieu of rations which amounts to a total of approximately $525.00. This is in addition to uniforms, books, and training equipment, all of which are furnished the students at government expense. For attendance at summer camp students receive approximately $105.00 additional.

### Course of Instruction

Air ROTC training is divided into two parts, the basic course during the freshman and sophomore years and the advanced course during the junior and senior years. Training in the basic course is primarily in basic military subjects which are common to all branches of the Service. In the advanced course, subjects are mainly of a specific nature with emphasis on Air Comptrollership and Public Information, and graduates will be designated as Air Comptrollers or Public Information Officers.

#### BASIC COURSE

Male students in the freshman class who are physically qualified, American citizens, and not yet 23 years of age, may take the basic courses in military science as a requirement toward graduation. Stu-

dents who are graduates of the Junior Division (High School) ROTC may be granted credit for a portion of the basic course. Credit also will be allowed equivalent to the first year of the basic course for six months or more of honorable service in World War II in the Army, Navy, Marine Corps, or Coast Guard.

ADVANCED COURSE

The advanced course consists of two years of instruction and a summer camp. The camp, at present, is of six weeks duration. The summer camp will normally come between the first and second years of the advanced course, i.e., between the junior and senior years. A student must have completed the basic course, or have had twelve months or more of honorable active service in World War II in the Army, Navy, Marine Corps, or Coast Guard to be eligible for enrollment in the advanced course and must:

a. not have reached 27 years of age at the time of initial enrollment;
b. be physically fit as evidenced by a rigid physical examination;
c. if exempted from the basic course by reason of previous military service, pass a special screening test;
d. have at least six academic quarters to complete before graduation;
e. be pursuing a course with the intention of securing a degree;
f. sign an agreement (contract) in writing to complete the course.

## Academic Credits

BASIC

For successful completion of the basic program covered during the freshman and sophomore years, the student receives a total of 16 quarter hours credit. During these two years he has attended Air ROTC four out of a possible six quarters. The drill period is continuous for the entire six quarters.

Credits earned in the basic course may be substituted for the following General College requirements:

a. For students entering the School of Commerce, successful completion of the AROTC Basic Course may be substituted for two of the required laboratory sciences.
b. For students entering the College of Arts and Sciences, successful completion of the AROTC Basic Course may be substituted for two of the required laboratory sciences, two of the

required freshman social sciences, or for one of the required laboratory sciences and one of the required social sciences.

ADVANCED

The advanced program requires attendance for the six quarters involved during the junior and senior years. A six-week training period (summer camp) is required between the junior and senior years. For the successful completion of the advanced program, credit for a total of five courses is granted.

Credits earned in the advanced course may be substituted for the following required courses:

a. School of Commerce. Successful completion of the Advanced AROTC Course may be substituted for five non-divisional electives or four non-divisional electives and one divisional elective.
b. College of Arts and Sciences. Successful completion of the Advanced AROTC Course may be substituted for five non-divisional elective or allied courses at the discretion of the dean.

## Grading System

The status of each student in the Air ROTC is that of an officer candidate. Evaluation of his abilities is not based entirely on the grade he is awarded for classroom recitations, oral or written, but includes his attitude and ability as a leader during practical drill periods. A student's potential value as a leader is demonstrated to an important degree by his response to the entire scope of military instruction and military procedure as portrayed by his interest, conduct, alertness, orderliness, classroom and drill attendance, neatness, care of his uniform and equipment, and similar related matters.

The student's final grade is based on an evaluation of these attributes combined with his academic standing. Where this evaluated standing indicates a grade of 90 per cent or better the student will be excused from final examinations.

## Distinguished Military Graduates

Upon completion of the advanced course, students who have outstanding records in military science as well as other academic subjects will be classed as Distinguished Military Graduates and be eligible to apply for Regular United States Air Force commissions.

### Texts and Equipment

The federal government provides all necessary texts and equipment to carry out the Air ROTC program.

### Uniforms

Uniforms for all enrollees are furnished by the government. The uniform is similar to that prescribed for officers in the regular service and consists of both summer khaki and winter wool, including coats, shoes, and all accessories.

Uniforms must be worn at all drill periods and may be worn at other classes and exercises.

### Enrollment and Continuance Requirements

The general requirements for enrollment and continuance in the Air ROTC are that the student be a citizen of the United States, be physically qualified as prescribed by the Department of the Air Force, be accepted by the institution as a regularly enrolled student, be under 23 years of age at the time of enrollment, except for veterans of World War II enrolling at college before January 1, 1950, and that he successfully complete such general survey or screening tests as are given to determine eligibility for admittance to the basic and advanced courses. Enrollees in the advanced course must agree to complete the course of instruction offered unless relieved by the Department of the Air Force.

### Deferment

A quota for deferment from induction into the armed services is assigned each year to the Air ROTC at this University. These deferments are allotted to individual enrollees of the program in accordance with their relative standing. Such deferred students are exempt from service in the armed forces while pursuing the Air ROTC program and, in general, until graduation from the University.

### Curriculum

AS 101-102 (8).
Basic Air Science.
**Three lecture and two laboratory hours a week, 101, fall quarter; 102, winter quarter.*

AS 201 (4). Prerequisite, AS 101-102.
Basic Air Science.
**Three lecture and two laboratory hours a week, fall quarter.*

*A two-hour laboratory drill period weekly will be required during spring quarter.

AS 202 (4). Prerequisites, AS 101-102, 201.
Basic Air Science, Air Comptrollership.
**Three lecture and two laboratory hours a week, winter quarter.*

†AS 203. Prerequisites, AS 101-102, 201.
Basic Air Science, Supply and Administration (Public Information). Students in Public Information Course must elect one of the following courses as approved by the Professor of Air Science and Tactics to fulfill the requirements of AS 203: Journalism 53, Journalism 80, English 44, Art 50, Physics 45, Psychology 24 or 25.

AS 301-302-303 (12). Prerequisite, completion of basic course or equivalent.
Advanced Air Science, Air Comptrollership.
*Four lectures and one laboratory hour a week, 301, fall quarter; 302, winter quarter; 303, spring quarter.*

AS 304 (4). Prerequisite, completion of basic course or equivalent.
Advanced Air Science, Supply and Administration (Public Information).
*Four lectures and one laboratory hour a week, fall quarter.*

†AS 305-306. Prerequisite, AS 304.
Advanced Air Science, Supply and Administration (Public Information).
Students in Public Information Course must elect two of the following courses as approved by the Professor of Air Science and Tactics to fulfill the requirements of AS 305-306: Journalism 53, Journalism 80, English 44, Art 50, Physics 45, Psychology 24 or 25.

AS 401-402 (10). Prerequisite, AS 301-302-303.
Advanced Air Science, Air Comptrollership.
*Five lectures and one laboratory hour a week, 401, fall quarter; 402, winter quarter.*

AS 403 (4). Prerequisites, AS 401-402 or 404, 405.
Advanced Air Science, General.
*Four lectures and one laboratory hour a week, fall quarter.*

AS 404 (5). Prerequisites, AS 304, 305-306.
Advanced Air Science, Supply and Administration (Public Information).
*Five lectures and one laboratory hour a week, spring quarter.*

AS 405. Prerequisites, AS 304, 305-306, 404.
Advanced Air Science, Supply and Administration (Public Information).
Students in Public Information Course must register for Radio 75S to fulfill the requirements of AS 405.
*Winter quarter.*

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*A two-hour laboratory drill period weekly will be required during spring quarter.
†A two-hour a week drill laboratory will be required.

## DEPARTMENT OF ANATOMY

Professors: C. W. HOOKER, W. C. GEORGE

Associate Professors: C. D. VAN CLEAVE, ARTHUR V. JENSEN, C. T. KAYLOR

Lecturers: W. W. VAUGHAN, ALEXANDER WEBB, JR.

Research Fellow: J. A. KIRKLAND

Technicians: MRS. CHARLOTTE WYATT, MRS. RUTH CHEEK, DOROTHY B. JONES

The courses include gross and microscopic anatomy, embryology, the topography of the body, the application and relation of anatomy to medicine and surgery, and the anatomy of the central nervous system and the organs of special sense. Before registering for any of these courses the academic student must secure the permission of the Dean.

101. CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE (6).
*Three lecture and six laboratory hours a week, winter quarter. Laboratory fee for non-medical students, $5.00.* Messrs. Jensen and Hooker.

102. GENERAL HISTOLOGY AND ORGANOLOGY (10).
*Five lecture and ten laboratory hours a week, fall quarter. Laboratory fee for non-medical students, $5.00.* Messrs. Hooker, George, Kirkland.

103. EMBRYOLOGY (4).
*One lecture and two laboratory hours a week, fall and winter quarters. Laboratory fee for non-medical students, $5.00.* Messrs. George and Hooker.

104. CYTOLOGY AND HISTOGENESIS (6). Prerequisites, Anatomy 102, Anatomy 103.
*Three lecture and six laboratory hours a week, spring quarter. Laboratory fee for non-medical students, $5.00.* Mr. George.

107ab. GROSS ANATOMY (20).
*Five lecture and twelve laboratory hours a week, fall and winter quarters. Laboratory fee for non-medical students, $15.00.* Messrs. Van Cleave, Jensen, Kaylor, Vaughan, Webb.

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## ANTHROPOLOGY

(See Sociology and Anthropology)

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## ARCHAEOLOGY

(See Classics)

## DEPARTMENT OF ART

Professors: J. V. ALLCOTT, KENNETH NESS, CLEMENS SOMMER
Lecturer: *W. M. PRINCE
Visiting Sculptor: EMMA LU DAVIS
Assistant Professors: †GEORGE KACHERGIS, ‡JOHN REMBERT
Curator: LYNETTE WARREN
Assistant: BETTIE MEADE CREIGHTON

Courses in art are for art majors and for general students in the University. Courses for art majors are planned to give the student a basic art training in studio work and art history within the liberal arts program, and also to lay the foundations for graduate work. Courses for general students provide an opportunity to study art for its broadening value in the liberal arts program. The study of art at the University is facilitated by books and photographs in Person Hall Art Library and by exhibitions in Person Hall Art Gallery and in the Morehead Building.

*Course leading to the A.B. degree with art as a major.* In the first two years the regular General College program is modified to make possible the taking of basic art courses as follows: In the freshman year, Art 44, 45, 46; in the sophomore year, Art 80, 84, 49, and choose two from Art 41, 42, 43. Non-art courses normally taken in the freshman and sophomore years: English 1, 2, 3; laboratory science; Mathematics 7 and 8 (or Greek or Latin); four courses in a foreign language. Other courses in the regular General College program are taken at a later time. The undergraduate major in art in the junior and senior years permits concentration in art history, art education, painting, sculpture, or graphic design.

For graduate programs in art history, creative work, or art education, see the Graduate School Catalogue.

The Department of Art reserves the privilege of keeping examples of the work of any student. Persons not regularly enrolled in the University who desire instruction in studio work may obtain special instruction by members of the art department. For courses in ancient art see the courses listed under the Department of Classics.

As a part in the program of the study of art are student group trips to art galleries. The cost for these trips is $20 to $30.

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*Absent on leave.
†Appointed September 1, 1949.
‡Resigned September 1, 1949.

## Courses for Undergraduates

The following three courses are introductions to the history and interpretation of art, tracing the three arts throughout Western civilization. For general students in the University. Each course may be taken separately.

41. HISTORY AND INTERPRETATION OF ARCHITECTURE (5).
*Fall quarter.* Mr. Sommer.

42. HISTORY AND INTERPRETATION OF SCULPTURE (5).
*Winter quarter.* Mr. Sommer.

43. HISTORY AND INTERPRETATION OF PAINTING (5).
*Spring quarter.* Mr. Sommer.

The following three courses are planned for the general student desiring an approach to art through doing work in the studio. Each course introduces the student to pen and ink, pencil, water color, and other art materials.

44. BEGINNING DRAWING (3).
Figure, landscape, and still life.
*Nine studio hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Kachergis.

45. BEGINNING COLOR (3).
Figure, landscape, still life, and creative problems.
*Nine studio hours a week, winter quarter. Laboratory fee, $7.50.* Mr. Kachergis.

46. BEGINNING DESIGN (3).
Study of color, form, and movement, as they relate to two- and three-dimensional design.
*Nine studio hours a week, spring quarter. Laboratory fee, $7.50.* Miss Davis.

48. LETTERING AND LAYOUT (3).
Fundamentals of lettering. Newspaper and magazine layout with emphasis on studio methods and techniques. Open to students in advertising, journalism, and other fields.
*Nine studio hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Ness.

49. DESIGN (3).
An introduction to studio methods in design with color, form, movement. Problems in textiles, furniture, display, etc.
*Nine studio hours a week, spring quarter. Laboratory fee, $7.50.* Mr. Kachergis.

50. PICTORIAL CONTINUITY (3).
Visualization and planning of film strips, exhibitions, picture books, and articles. For students of Public Health, Education, Sociology, and other departments. Students who do not sketch will work in teams with those who do.
*Eight studio hours a week, winter quarter. Laboratory fee, $7.50.* Mr. Allcott.

51 MEDIEVAL ARCHITECTURE (5).
An illustrated lecture course on the great cathedrals in France, Germany, and England during the Romanesque and Gothic periods.
Mr. Sommer.

52. RENAISSANCE ARCHITECTURE (5).
A study of architecture in Italy from the fourteenth to the sixteenth century with emphasis on the revival of classic principles and form.
Mr. Sommer.

53. MODERN ARCHITECTURE (5).
An illustrated lecture course. Architecture from the eighteenth to the twentieth century, with attention to Frank Lloyd Wright, Corbusier, Gropius, and other architects concerned with domestic architecture. Field trips.
*Fall quarter.* Mr. Allcott.

54. ADVERTISING DESIGN (3). Prerequisites, Art 44, 45, 48.
Design of magazine page, poster, book jacket, packaging, direct mail, and other forms of advertising. Problems from spot designs to comprehensive rendering of larger projects.
*Nine studio hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Ness.

55. ARTS AND CRAFTS (3).
Sketching and painting; clay modeling and paper sculpture; block printing; textile designs. The planning of art projects with regard to local resources; methods of presenting projects.
*One lecture and six studio hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Kachergis.

61. MEDIEVAL SCULPTURE.
A study of medieval sculpture during the Romanesque and Gothic periods, with emphasis on the sculptural decorations of the French cathedrals.
Mr. Sommer.

62. RENAISSANCE SCULPTURE (5).
Beginning with the classic revival in the thirteenth century, this course will trace the Renaissance idea in sculpture from the Pisanos to Michelangelo.
Mr. Sommer.

70. AMERICAN ART (5).
From colonial times to the present.
(Not offered in 1949-1950.) *Winter quarter.* Mr. Allcott.

71. ITALIAN RENAISSANCE PAINTING (5).
A study of painting in Italy during the fifteenth and sixteenth centuries and of its significance for the cultural development.
*Winter quarter.* Mr. Sommer.

74. BAROQUE PAINTING IN THE NETHERLANDS (FLANDERS AND HOLLAND) (5).
This course will be centered on the two great masters, Rubens and Rembrandt, with special stress on their different interpretations of the Baroque idea.
*Spring quarter.* Mr. Sommer.

75. CONTEMPORARY ART (5).
An illustrated lecture course. Recent painting, sculpture, and architecture; expressionism, cubism, superrealism, and other schools; the artistic development of certain artists such as Matisse and Picasso will be traced.
*Spring quarter.* Mr. Allcott.

Education 77. MATERIALS AND METHODS FOR THE TEACHING OF ART (5).
*Winter quarter.* Mr. Kachergis.

Education 78. PRACTICE TEACHING OF ART (5).
*Spring quarter.* Mr. Kachergis.

80. DRAWING (3). Prerequisites, Art 44, 45, 46 or equivalent.
Charcoal, pen and ink, water color, and gouache. Still life, landscape, and figure with emphasis on line, tone, and design.
*Nine studio hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Ness.

81. COMPOSITION (3). Prerequisites, Art 44, 45, 46.
Emphasis on form, structure, and representation.
*Nine studio hours a week, winter quarter. Laboratory fee, $7.50.* Mr. Ness.

82. PAINTING: LANDSCAPE AND FIGURE IN VARIOUS MEDIUMS (3). Prerequisites, Art 44, 45, 46.
Special consideration for color, tone, and form.
*Nine studio hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Ness.

83. ART ANATOMY (3).
*Eight studio hours a week. Laboratory fee, $7.50.* Miss Davis.

84. SCULPTURE (3).
Experiments in the three-dimensional language of form, planes, and lines in space. Work in clay, wood, plastics, paper, papier-mâché, cloth, wire, and other materials.
*Nine studio hours a week, winter quarter. Laboratory fee, $7.50.* Miss Davis.

85. ADVERTISING ART (3). Prerequisites, Art 49, 54.
Finished layout and rendering techniques for illustrations, charts, three-dimensional display, exhibition, and other materials. Black and white, color; experimental work in various mediums.
*Nine studio hours a week. Laboratory fee, $10.00.* Mr. Ness.

86. SCULPTURAL DESIGN (3).
Elements of sculpture, with form in nature taken as the point of departure. Problems in the relationships of solids and their surrounding spaces.
*Eight studio hours a week, spring quarter. Laboratory fee, $7.50.* Miss Davis.

87. LIFE SCULPTURE (3).
Work from the living model. Consideration of anatomy, structure, and the possibilities of figure composition.
*Eight studio hours a week. Laboratory fee, $7.50.* Miss Davis.

93abc. ART COMMUNICATION (3; 1 each quarter).
The presentation of art ideas to the public through exhibitions, printed accounts, gallery and radio talks, and other activities.
*Three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $2.50 each quarter.* Mr. Kachergis.

## Courses for Graduates and Advanced Undergraduates

104. ADVANCED DRAWING AND PAINTING (3). Prerequisites, Art 80, 81, 82.
Water color, gouache, and oil. Consideration of line, tone, and form in representative works and abstract design.
*Nine studio hours a week, spring quarter. Laboratory fee, $15.00.* Mr. Ness.

105. ADVANCED PAINTING AND PAINTING PROCESSES (3). Prerequisites, Art 80, 81, 82.
Water color, tempera, and oils. Preparation of canvas, gesso, and fresco panels.
*Nine studio hours a week, fall quarter. Laboratory fee, $15.00.* Mr. Ness.

106. ADVANCED COMPOSITION, LINE DESIGN, FLAT PATTERN AND SPACE COMPOSITION (3). Prerequisites, Art 80, 81, 82.
Consideration of structure and form in abstracts from figure and landscape. Emphasis on development of personal methods.
*Nine studio hours a week, winter quarter. Laboratory fee, $15.00.* Mr. Ness.

108. ILLUSTRATION (3).
*Laboratory fee, $10.00.*

109. COSTUMED FIGURE (3).
*Laboratory fee, $7.50.*

110. LIFE DRAWING (3). Prerequisite, consent of instructor.
Work from the living model: pencil, chalk, crayon, ink. Consideration of anatomy and composition. May be taken three times for credit.
*Nine studio hours a week, winter quarter. Laboratory fee, $7.50.* Miss Davis.

111. SCULPTURAL DESIGN (3).
*Winter quarter. Laboratory fee, $10.00.* Miss Davis.

112. LIFE SCULPTURE (3).
*Laboratory fee, $10.00.* Miss Davis.

113. MATERIALS OF SCULPTURE (3).
*Spring quarter. Laboratory fee, $10.00.* Miss Davis.

120. ETCHING (3).
*Spring quarter, 1951. Laboratory fee, $20.00.* Mr. Kachergis.

121. LITHOGRAPHY (3).
*Laboratory fee, $20.00.* Messrs. Kachergis, Ness.

122. SERIGRAPHY (3).
*Laboratory fee, $20.00.* Messrs. Kachergis, Ness.

170. MODERN PAINTING (5).
An illustrated lecture course, painting in Western Europe and the United States, with accent on Impressionism and Post Impressionism.
*Winter quarter.* Mr. Allcott.

171. FLORENTINE PAINTING (5). Prerequisite, Art 43.
This course will deal with the development of Renaissance painting in Florence from the late thirteenth century to the beginning of the sixteenth century.
Mr. Sommer.

174. FIFTEENTH CENTURY PAINTING IN NORTHERN EUROPE (5). Prerequisite, Art 43.
After a brief discussion of the roots of naturalism in Flemish painting, the early masters from the Van Eycks to Breughel will be discussed.
(1950-1951 and alternate years.) *Fall quarter.* Mr. Sommer.

177. ORIGINS OF EUROPEAN ENGRAVING AND WOODCUT (5). Prerequisite, Art 42.
After tracing the origins and technique of engraving and woodcut, their interrelations with painting and sculpture will be discussed, with emphasis on the development in Germany.
(1949-1950 and alternate years.) Mr. Sommer.

## Courses for Graduates

240abc. PAINTING (6 each).
*Laboratory fee, $20.00.* Messrs. Kachergis, Ness.

241abc. SCULPTURE (6 each).
*Laboratory fee, $20.00.* Miss Davis.

242abc. GRAPHIC ARTS (6 each).
*Laboratory fee, $20.00.* Messrs. Kachergis, Ness.

243abc. GRAPHIC DESIGN (6 each).
*Laboratory fee, $20.00.* Messrs. Allcott, Ness.

253. MODERN ARCHITECTURE (5).
Mr. Allcott.

261. LATE GOTHIC SCULPTURE (5). Prerequisites, Art 42 and 61.
Sculpture in Germany, the Netherlands, France, and Scandinavia in the fifteenth and sixteenth centuries. The relation between sculpture and contemporaneous painting and graphic art will be discussed.
*Winter quarter.* Mr. Sommer.

270. STUDIES IN MODERN PAINTING (5).
*Fall quarter.* Mr. Allcott.

271. VENETIAN PAINTING (5). Prerequisites, Art 43 and 71.
The course will be concerned principally with Renaissance painting (from Bellini to Tintoretto) and will conclude with a discussion of eighteenth century masters (Tiepolo and Guardi).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Sommer.

272. NORTHERN PAINTING (5). Prerequisites, Art 43 and 71.
After an introductory discussion of medieval painting, the course will trace the beginning of the new painting in the Netherlands and its spread over the North-European countries.
(1949-1950 and alternate years.) *Winter quarter.* Mr. Sommer.

274. BAROQUE PAINTING IN ITALY AND FRANCE (5). Prerequisites, Art 43 and 71.
After a discussion of Mannerism, the Baroque idea will be traced through the French Classicists and the Italian Naturalists to the eighteenth century masters, Watteau and Fragonard, Tiepolo and Guardi.
*Spring quarter.* Mr. Sommer.

301. SEMINAR COURSE (5).
A research course in a special field under the direction of a member of the department.

## DEPARTMENT OF ASTRONOMY

Professor: ROY K. MARSHALL
Technician: ANTHONY F. JENZANO

The courses listed below will be supplemented by advanced courses, of both mathematical and physical nature, as rapidly as students are prepared to undertake them. Those students who intend to undertake advanced work in astronomy should take Physics 24-25 and Mathematics 7, 8, and 31 as early as possible.

The Morehead Planetarium will be used whenever practicable in both classroom and laboratory work.

31. GENERAL ASTRONOMY: THE SOLAR SYSTEM (5).
An elementary course introducing the face of the sky, the apparent motions of the heavenly bodies, the constellations, the instruments of astronomy, the sun, the moon, planets, meteors, and comets.
*Four lecture and two laboratory hours a week, fall and winter quarters. Laboratory fee, $3.00. Laboratory, usually at night, to be arranged.* Mr. Marshall.

32. GENERAL ASTRONOMY: STARS, NEBULAE, GALAXIES (5). Prerequisite, Astronomy 31.
A general survey of the sidereal system, with emphasis on the methods and results of modern determinations of stellar distances, dimensions, spectral classifications, the structure of the Milky Way System, the observable universe.
*Four lecture and two laboratory hours a week, winter and spring quarters. Laboratory fee, $3.00. Laboratory, usually at night, to be arranged.* Mr. Marshall.

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## DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

Professor: D. A. MACPHERSON
Associate Professor: F. L. RIGHTS
Assistant Professor: W. R. STRAUGHN
Technicians: DORIS P. BASON, LOIS P. TILLMAN, BRUNHILDE FERGUSON
Graduate Assistant: ANN BEASLEY

For the S.B. degree with major in bacteriology, six courses (or thirty quarter hours) in bacteriology are required. One course in parasitology may be substituted for one of the required courses in bacteriology. In addition, six courses in allied sciences and three courses outside the Division of Natural Sciences are required. A suggested program of study follows:

FIRST YEAR

Chemistry 1-2-3 or 1-2-31
English 1, 2
Mathematics 7, 8, or R, 7x, 8
Social Science 1-2
French or German 3-4 (or 1-2 if student lacks adequate preparation)
Hygiene 11
Physical Education 1, 2, 3

SECOND YEAR

English 3 and 4 or 5 or 6
French or German 21-22
Chemistry 42
Botany 41
Zoology 41, 42
Bacteriology 51
Physical Education 4, 5, 6

THIRD YEAR

Chemistry 61, 62
Physics 24-25
Bacteriology 101, 104, 107
Elective, 2 courses

FOURTH YEAR

Bacteriology 112, 115 (Other courses in bacteriology or one in parasitology may be substituted with the consent of the department.)
Elective, 6 full quarter courses, of which 3 must be outside the Division of Natural Sciences.

## Course for Undergraduates

51. ELEMENTARY BACTERIOLOGY (6). Prerequisites, Chemistry 1-2-3 or 1-2-31 and one course in botany or zoology.

*Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $4.00.* Mr. Straughn.

## Courses for Graduates and Advanced Undergraduates

101. PATHOGENIC BACTERIOLOGY (8). Prerequisites, Bacteriology 51, Chemistry 1-2, 31, 42, and two courses in botany, physics, or zoology.

This course includes a study of the important bacterial, rickettsial and virus diseases of man. Practical application of bacteriology to the diagnosis of disease is stressed.

*Three lecture and nine laboratory hours a week, fall quarter. Laboratory fee for non-medical students, $10.00.* Messrs. MacPherson, Rights, Straughn.

104. IMMUNOLOGY (5). Prerequisite, Bacteriology 101.

Theories of infection and resistance; preparation and use of vaccines and immune sera; and the practical applications of serology to the diagnosis of disease.

*Three lecture and five laboratory hours a week, winter quarter. Laboratory fee for non-medical students, $10.00.* Messrs. MacPherson, Rights.

107. BACTERIOLOGY OF WATER AND FOODS (5). Prerequisite, Bacteriology 51.

The bacteriological examination of water and foods and the relation of bacteria, yeasts, and molds to the preservation and spoilage of foods are studied.

*Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, $6.00.* Messrs. MacPherson, Straughn.

110. PUBLIC HEALTH LABORATORY METHODS (5). Prerequisites, Bacteriology 101 and 104 or equivalent. Does not carry credit toward S.B. in Bacteriology.

A course of lectures and laboratory exercises designed for those wishing to acquire knowledge of modern bacteriological diagnostic methods for diseases of public health importance.

(Not offered in 1950.)

*Two lecture and six laboratory hours a week, fall quarter. Laboratory fee, $7.50.* Mr. MacPherson.

112. BACTERIAL PHYSIOLOGY (6). Prerequisites, Bacteriology 51, Chemistry 31, 42, 61, 62, and preferably Biochemistry 101, 102.

This course is concerned with a study of the growth, respiration, nutrition, enzyme reactions, and effects of physical and chemical agents on bacteria.

*Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $6.00.* Messrs. Rights, Straughn.

115, 116, 117. ADVANCED BACTERIOLOGY OR IMMUNOLOGY (5½ each quarter). Prerequisites, Bacteriology 101 and 104 or equivalent.

A course designed to introduce the student to research methods. Minor investigative problems are conducted by the student with advice and guidance of the staff.

*One conference and nine laboratory hours a week, fall, winter, or spring quarters. Laboratory fee, $10.00.* Messrs. MacPherson, Rights.

120. VIROLOGY (6). Prerequisites, Bacteriology 101 and 104.

The nature of viruses and rickettsiae are studied; laboratory exercises include practical diagnostic methods and emphasize procedures for the examination and propagation of these agents.

*Two lecture, one conference, and six laboratory hours a week, spring quarter. Laboratory fee, $12.00.* Mr. Rights.

### Courses for Graduates

301, 302, 303. RESEARCH IN BACTERIOLOGY, IMMUNOLOGY, OR VIROLOGY (5 or more each quarter). Prerequisite, permission of the department.

Opportunity is offered properly prepared students to undertake research in bacteriology, immunology, or virology.

*Hours and credits to be arranged; throughout the year. Laboratory fee, to be determined.* Messrs. MacPherson, Rights.

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## DEPARTMENT OF BIOLOGICAL CHEMISTRY AND NUTRITION

Professor: J. C. ANDREWS
Associate Professor: G. C. KYKER
Instructors: M. K. BERKUT, L. I. GARDNER
Graduate Assistants: R. B. BRUCE, R. L. GOLBY
Alamance County Hospital Research Assistant: E. T. VISER
Technical Assistant: J. H. McIVER

### Courses for Graduates and Advanced Undergraduates

101. BIOLOGICAL CHEMISTRY (7). Prerequisites, Chemistry 42, 61, and 62 or equivalent.

A class and laboratory course covering the fundamental chemistry of carbohydrates, fats, proteins, and electrolytes.

*Three lecture and eight laboratory hours a week, winter quarter. Laboratory fee for non-medical students, $10.00.* Messrs. Andrews, Kyker, Berkut, Gardner.

102. BIOLOGICAL CHEMISTRY (5). Prerequisite, Biological Chemistry 101 or equivalent.

A class and laboratory course dealing with the quantitative aspects of metabolism with respect to the major foodstuffs, minerals, and vitamins. The laboratory

work includes gastric juice, blood, and urine analysis and introductory nutritional experiments.

*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee for non-medical students, $10.00.* Messrs. Andrews, Kyker, Berkut, Gardner.

103. FOOD CHEMISTRY (6). Prerequisites, Biological Chemistry 101, 102.

A course dealing with foodstuffs and the application of the basic principles of biological chemistry to the functional reactions which the foodstuffs undergo in the nutrition of the animal body. The laboratory work includes both nutritional experimentation on laboratory animals and chemical analysis.

*Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Messrs. Andrews, Kyker.

## Courses for Graduates

201, 202, 203. ADVANCED BIOLOGICAL CHEMISTRY (6 each). Prerequisites, Biological Chemistry 101, 102 or equivalent.

*Equivalent of six hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 each quarter.* Messrs. Andrews, Kyker.

211, 212, 213. SEMINAR (1 each). Prerequisites, Biological Chemistry 101, 102 or equivalent and a reading knowledge of German.

*One hour a week, fall, winter, and spring quarters.* Messrs. Andrews, Kyker, Gardner.

301, 302, 303. RESEARCH IN BIOLOGICAL CHEMISTRY (6 each). Prerequisite, Biological Chemistry 201 or equivalent.

*Equivalent of six hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 each quarter.* Messrs. Andrews, Kyker.

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## DEPARTMENT OF BOTANY

Professors: J. N. COUCH, *W. C. COKER, H. R. TOTTEN, J. E. ADAMS
Associate Professor: V. A. GREULACH
Assistant Professors: EARLENE ATCHISON, ALBERT E. RADFORD
Instructor: W. R. PENDERGRASS
Part-time Instructors: E. T. BROWNE, JR., ALICE R. GILES, KATHLEEN GOLDIE-SMITH, W. J. KOCH, C. LELAND RODGERS
Research Assistant: ALMA HOLLAND BEERS
Teaching Fellow: E. GIBBES PATTON
Curator: ALBERT E. RADFORD
Graduate Assistants: EDMUND BERKELEY, WINIFRED COMPTON, J. H. HOBBS, DANIEL KIRK, ELIZABETH MCCHESNEY, MARY JO PARRISH, CONNOR READ (fall quarter)

For the A.B. with major in botany, six courses of the level of 41 or higher are required; one course in bacteriology may, with the consent of the department, be considered as part of the major. There are also required six courses in allied sciences—zoology, chemistry,

*Kenan Research Professor, Emeritus.

geology, and physics. (Zoology 41 and Chemistry 1-2-3 or 1-2-31 must be included if not previously taken to satisfy General College requirements.) Six courses in departments outside of the Division of Natural Sciences are required.

Those students who plan to teach in public high schools should read the instructions under the School of Education section of the catalogue.

## Courses for Undergraduates

1. BOTANY (5). Freshman elective. This may be taken to satisfy partially the requirement for natural science in the General College but should not be taken by anyone intending to major in a natural science.

The structure and functions of plants, their evolution, and a survey of fundamental biological facts and principles illustrated by plants and the relationship of these to man.

*Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $2.00.* Mr. Adams, Miss Atchison, Mr. Greulach; Assistants.

41. GENERAL BOTANY (6). To be taken instead of Botany 1 by students intending to major in the natural sciences.

An introduction to the structure, physiology, and classification of plants.

*Four lecture and four laboratory or field hours a week, fall, winter, and spring quarters, with a special section in the spring quarter for Pharmacy students. Laboratory fee, $4.00.* Messrs. Couch, Totten, Radford; Assistants.

42. CRYPTOGAMIC BOTANY (6). Prerequisite, Botany 1 or 41.

A continuation of General Botany, with a study of the structure, physiology, and importance of the lower plant groups.

*Four lecture and four laboratory or field hours a week, winter quarter. Laboratory fee, $6.00.* Messrs. Couch, Radford; Assistants.

43. SEED PLANTS (6). Prerequisite, Botany 1 or 41.

A continuation of General Botany, with more advanced work in the structure and classification of seed plants. Special attention to local flora, introduced ornamental plants, and propagation of cultivated plants.

*Three lecture and six laboratory or field hours a week, spring quarter. Laboratory fee, $4.00.* Mr. Totten.

45. PHARMACOGNOSY (5). Prerequisite, Botany 41. Required of second-year students in the School of Pharmacy and open to others only by special permission of the Botany Department.

*Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, $6.00.* Mr. Totten, Assistants.

## Courses for Graduates and Advanced Undergraduates

102. FUNGI (5). Prerequisite, Botany 42.

A survey of the fungal groups including the true Fungi, Myxomycetes, and Lichens.

(Not offered in 1949-1950.) *Two lecture and six laboratory hours a week, fall quarter. Laboratory fee, $4.00.* Mr. Couch.

103. ALGAE (5). Prerequisite, Botany 42.
A survey of the Algae including both fresh-water and marine groups.
*Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $4.00.* Mr. Couch.

104. BRYOPHYTES (5). Prerequisite, Botany 42.
A survey of Liverworts and Mosses.
(Not offered in 1949-1950.) *Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, $4.00.* Mr. Couch.

111, 112, 113. FUNGI: PHYCOMYCETES, ASCOMYCETES, BASIDIOMYCETES (5 each). Prerequisite, Botany 42.
Preparatory courses for research in Fungi; mycological foundation for work in plant pathology. Lectures and reports on the literature; collection and study of specimens.
*Two lecture and six laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, $4.00 each quarter.* Mr. Couch.

121. PLANT PHYSIOLOGY (5). Prerequisites, Botany 42 or 43, General Chemistry. Advised: Organic Chemistry.
A study of the life processes of plants, including cell physiology, water relations, photosynthesis, carbohydrate, fat, and nitrogen metabolism, mineral salt absorption and use, digestion, translocation, respiration.
*Three lecture and four laboratory hours a week, fall quarter.* (Offered in winter quarter of 1949-1950.) *Laboratory fee, $8.00.* Mr. Greulach.

122. PLANT GROWTH (5). Prerequisite, Botany 121.
Nature of plant growth, growth substances, environmental factors affecting growth, growth correlations and periodicity, reproductive development, germination and dormancy, plant movements.
*Three lecture and four laboratory hours a week, winter quarter.* (Offered in spring quarter of 1949-1950.) *Laboratory fee, $8.00.* Mr. Greulach.

141. FERNS (5). Prerequisite, Botany 42.
A study of the structure, growth, and classification of the ferns.
(Not offered in 1949-1950.) *Two lecture or report and six laboratory or field hours a week, fall quarter. Laboratory fee, $4.00.* Mr. Totten.

145. ADVANCED MACROPHARMACOGNOSY (5). Prerequisite, Botany 45.
Studies in the culture of crude drugs in the drug garden and in the harvesting and preparation of cultivated and wild crude drugs. Of special interest to graduate students in the School of Pharmacy, though open to others also.
*Two lecture or report and six laboratory or field hours a week, fall quarter. Laboratory fee, $10.00.* Mr. Totten.

147. ADVANCED MICROPHARMACOGNOSY (5). Prerequisite, Botany 45.
Advanced study of plant drugs; general methods in microanalysis of powdered drugs; preparation of materials for study; microanalysis of typical drugs and their adulterants and mixtures. Of special interest to graduate students in the School of Pharmacy, though open to others also.
*Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Adams.

151, 153. ADVANCED TAXONOMY OF SEED PLANTS (5 each quarter). Prerequisite, Botany 43.

Advanced work in the collection, identification, preparation of herbarium specimens, and structural studies of the fall flowering (151) and the spring flowering (153) seed plants.

*Two lecture or report and six laboratory or field hours a week, fall and spring quarters. Laboratory fee, $4.00 each quarter.* Messrs. Adams, Totten.

154, 155. DENDROLOGY (5 each). Prerequisite, Botany 43.

Course 154 is a taxonomic study of the woody plants based largely on bud, bark, and wood characteristics; 155 is based largely on foliage characters.

154, *two lecture or report and six laboratory or field hours a week, winter quarter.* 155, *five lecture or report and fourteen laboratory or field hours a week in one term of the summer session. Laboratory fee, $4.00.* Mr. Totten.

156. PLANT GEOGRAPHY (3). Prerequisite, Botany 43.

Discussion of the principles and problems of the geographic distribution of plants.

(Offered in 1948-49 and alternate years.) *Three lecture or report hours a week, fall quarter.* Mr. Adams.

157. PLANT ANATOMY (5). Prerequisites, Botany 42 and 43.

Introduction to the developmental anatomy of vascular plants with consideration of the phylogenetic aspects of the subject; practice in methods of anatomical microtechnique.

*Two lecture or report and six laboratory hours a week, winter quarter. Laboratory fee, $4.00.* Mr. Adams.

162. STUDIES IN THE HISTORY OF BOTANY (3). Prerequisite, Botany 42 or 43.

Lectures, readings, and reports on the persons and the origins of the theories and laws which have been important in the history and development of botanical science.

(Not offered in 1949-1950). *Three lecture or report hours a week, winter quarter.* (This course may be repeated by students in subsequent years for additional credit.)

166. CYTOLOGY (5). Prerequisites, Botany 42 and 43.

The study of the structure and function of the cell.

*Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $4.00.* Miss Atchison.

176. CYTOGENETICS (5). Prerequisites, Botany 41 and Cytology or Genetics.

Application of cytological and genetic techniques to problems in plant breeding and growth.

*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $4.00.* Miss Atchison.

## Courses for Graduates

211, 212, 213. PROBLEMS IN FUNGI (5 each quarter). Prerequisite, consult the department.

Investigation of a research problem under the guidance of the instructor, preferably in Phycomycetes or Basidiomycetes and in the taxonomy, morphology, physiology, or genetics of fungi.

*Fall, winter, and spring quarters. Laboratory fee, $4.00 each quarter.* Mr. Couch.

221, 222, 223. PROBLEMS IN PLANT PHYSIOLOGY (5 each quarter). Prerequisites, Botany 121 and 122.

Detailed consideration of specific topics and problems of plant physiology, including laboratory studies and extensive reading and discussion of original literature, the subjects covered each quarter to be selected after consultation between instructor and students.

*Lecture, discussion, and laboratory hours to be arranged to suit the problems under consideration, fall, winter, or spring quarter. Laboratory fee, $8.00 each quarter.* Mr. Greulach.

251, 252, 253. MORPHOLOGY OF SEED PLANTS (5 or 2½ each quarter). Prerequisite, Plant Anatomy.

Advanced work in the embryology and anatomy of seed plants, including the preparation of material for the microscopic study of special problems.

*Fall, winter, and spring quarters. Laboratory fee, $4.00 a quarter.* Mr. Adams.

276. CYTOTAXONOMY (3). Prerequisites, Botany 151 or 153 and Cytology or Genetics.

Seminar discussions on the relation of cytological and genetic data to problems in taxonomy and phylogeny.

*Three lecture or report hours a week, winter quarter.* Miss Atchison.

301, 302, 303. GRADUATE RESEARCH (5 or 2½ each quarter).

Original work on thesis problem under the guidance of an instructor, to be pursued in successive quarters as necessary.

*Laboratory fee, $4.00 a quarter.* Messrs. Couch, Totten, Adams, Greulach, Miss Atchison.

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## DEPARTMENT OF CHEMISTRY

Professors: RALPH WALTON BOST, *FRANK KENNETH CAMERON, JAMES TALMAGE DOBBINS, HORACE DOWNS CROCKFORD, EDWIN CARLYLE MARKHAM, OSCAR KNEFLER RICE, FLOYD HARRIS EDMISTER, SAMUEL BRADLEY KNIGHT, ARTHUR ROE

Associate Professors: ROBERT LAMBERT MCKEE, SHEPPARD YOUNG TYREE

Lecturer in Chemistry: GEORGE OSMORE DOAK

Assistant Professor: JOHN CHARLES MORROW III

Instructors: FREDERICK BLOUNT JOYNER, ROSS LOMBARD PARKS, JEAN PAUL WILLIAMS

Teaching Fellows: LOUIS FOSTER THEILING, FRANCIS WORTHINGTON CHAPMAN, JOHN ATTERBURY MONTGOMERY

Graduate Assistants: HORACE ADAMS, JR., JOHN WINFRID AGER, WARREN E. BAECHT, ROY HORTON BAILEY, EDWARD BERNASEK, JACQUELEENE BOWEN, ARTHUR LESLIE BRIDGMAN, JAMES HAMIEL BRUMBAUGH, FAIRIE LYN CARTER, PAUL HUBERT CHEEK, SCOTT JULIUS CHILDRESS, CRAYTON MCCANTS CRAWFORD, FRETWELL GOER

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*Professor Emeritus.

CRIDER, JAMES TALMAGE DOBBINS, JR., ROY JACKSON FAHL, PHILIP REX FERGUSON, JOSEPH BURTON FINLAY, THOMAS C. FRAZIER, JOHN WARREN GEORGE, JOHN BROCKENBOROUGH HARVIE, HOMER ARTHUR HARTUNG, JOHN WILLIAM HEAD, CHARLES LEROY HENRY, WILLIAM STRONG HUMMERS, FRANKLIN WARD JAMES, EDWARD CHARLES LEONARD, STANLEY HANCOCK PATTEN, MILLER HARRELL PETERSON, ROBERT WILLIAM ROWDEN, ALEXANDER ALEXANDROVITCH SAKHNOVSKY, JAMES EARL SANSING, ROBERT BERNARD SELIGMAN, HAMILTON BENTON TATUM, MARKS PURRINGTON UNDERWOOD, WILLIAM LEE WILEY, MELDRUM BARNETT WINSTEAD, SUSAN NOWLIN WOODSON

Glass Blower: DANA E. SAMPSON

Instrument Maker: A. R. BENNETT

For the A.B. with a major in Chemistry these are required: Chemistry 1-2-3, 31, 42, 61, 62, or Chemistry 1-2-31, 42, 51, 61, 62; and for either sequence two of the following: Chemistry 41, 63, 83. Six courses in other natural sciences and six courses in departments outside the Division of Natural Sciences are also required.

Those students who plan to teach in public high schools should read the statement on pages 146-47.

## *Bachelor of Science in Chemistry

### FRESHMAN YEAR

Chemistry 1-2-31
or
†Chemistry 1-2-3, 31
English 1, 2, 3
Math. 7, 8
German 1
Hygiene 11
Physical Education

### SOPHOMORE YEAR

†Chemistry 51, 42, 41
Math. 31, 32, 33
Physics 24-25 or 34, 35
‡German 2-3-4
English 4 or 5 or 6 or fine arts option
Physical Education

### JUNIOR YEAR

Chemistry 61, 62, 63
Chemistry 181, 182, 183
English 59
§Electives, 2 non-science courses

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*This course meets the requirements of the American Chemical Society for the training of professional chemists.

†If the sequence, Chemistry 1-2-3, 31, is followed, Chemistry 31 will be delayed until summer school or the sophomore year, and Chemistry 51, which will be counted as one of the chemistry electives, will be delayed until the senior year. (See *note on page 215.)

‡It is understood that the language requirement of the General College must be satisfied.

§Select two courses from the following: Economics 31-32, 41, 61; History 48, 49, 71, 72, 134, 135, 136, 167, 168, 170.

Also, select two from the following: Political Science 41, 42, 52, 101, 142; Sociology 51, 52, 167.

In special cases, subject to approval, two courses in a modern foreign language may be substituted for two on the foregoing lists.

SENIOR YEAR

Botany 41 or Zoology 41
*Chemistry electives, 18 quarter hours
Physics elective, one of the following courses: Physics 52, 53, 54, 56, 61
†Non-science electives, 2 courses
Free electives, 2 courses not in chemistry

## Courses for Undergraduates

1-2-3. GENERAL DESCRIPTIVE CHEMISTRY (15). Chemistry 31 may be substituted for Chemistry 3. Chemistry 3 may not be taken after credit has been received for Chemistry 31. No credit will be given for Chemistry 1-2 until either Chemistry 3 or Chemistry 31 is completed.

*Three lecture and four laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 a quarter.* Messrs. Markham, Knight, Tyree, Morrow; Assistants.

31. QUALITATIVE ANALYSIS (6). Prerequisite, Chemistry 1-2 or equivalent.

*Three lecture and six laboratory hours a week, fall and spring quarters. Laboratory fee, $10.00.* Messrs. Dobbins, Markham, Knight; Assistants.

41. ELEMENTARY QUANTITATIVE ANALYSIS: GRAVIMETRIC (6). Prerequisite, Chemistry 42.

*Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Messrs. Dobbins, Knight; Assistants.

42. ELEMENTARY QUANTITATIVE ANALYSIS: VOLUMETRIC (6). Prerequisite, Chemistry 31.

*Three lecture and six laboratory hours a week, winter or spring quarter. Laboratory fee, $10.00.* Messrs. Dobbins, Knight; Assistants.

51. INORGANIC CHEMISTRY (6). Prerequisites, Chemistry 1-2-3, 31, or 1-2-31, or equivalent.

*Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Messrs. Knight, Tyree; Assistants.

61, 62, 63. ORGANIC CHEMISTRY (6 each). Prerequisite, Chemistry 31.

*Three lecture and six laboratory hours a week.* Chemistry 61 is offered in the fall and winter quarters; Chemistry 62 in the winter and spring quarters; and Chemistry 63 in the spring quarter. *Laboratory fee, $10.00 a quarter.* Messrs. Bost, Roe, McKee.

83. PHYSICAL CHEMISTRY FOR PREMEDICAL STUDENTS (6). Prerequisites, Chemistry 31, 42, 62, Math. 7, 8, and one year of college physics. Does not carry credit toward S.B. in Chemistry.

Designed for A.B. students or students taking premedical, pharmaceutical, or biological work.

*Five lecture and two laboratory hours a week, fall and spring quarters. Laboratory fee, $3.00.* Messrs. Crockford, Rice, Morrow.

## Courses for Graduates and Advanced Undergraduates

101. SPECIAL PROBLEMS IN CHEMISTRY (1 to 3). Prerequisite, to be determined by consultation.

*Equivalent of one to three hours a week, every quarter. Laboratory fee, to be determined by consultation with adviser or head of the department.* Any member of the departmental staff.

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*Not more than one and a half courses may be taken in any one of the five divisions of chemistry: inorganic, analytical, organic, physical, and industrial.

†Select two courses from the following: Economics 31-32, 41, 61; History 48, 49, 71, 72, 134, 135, 136, 167, 168, 170.

102. CHEMICAL LITERATURE (3). Prerequisite, Chemistry 63. (1950-1951 and alternate years.) *Three hours a week, fall quarter.* Mr. Wiley.

143. THEORETICAL ANALYTICAL CHEMISTRY (6). Prerequisites, Chemistry 31, 41, 42.
*Six hours a week, winter quarter.* Mr. Dobbins.

145. INSTRUMENTAL ANALYSIS. ELECTRICAL METHODS (3). Prerequisites, Chemistry 41, 42.
*One lecture and four laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Mr. Markham.

146. INSTRUMENTAL ANALYSIS. OPTICAL METHODS (3). Prerequisites, Chemistry 41, 42.
*One lecture and four laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Mr. Markham.

147. QUANTITATIVE ORGANIC MICROANALYSIS (3). Prerequisites, Chemistry 41, 42, 63.
*Six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Markham.

148. INORGANIC MICROANALYSIS (3). Prerequisites, Chemistry 41, 42.
*Six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Markham.

151, 152, 153. ADVANCED INORGANIC CHEMISTRY (3 each). Prerequisites, Chemistry 31, 42.
*Three hours a week, fall, winter, and spring quarters.* Mr. Edmister.

154. INORGANIC PREPARATIONS (3). Prerequisites, Chemistry 41, 42, 51, 63, or their equivalent.
*Six laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Mr. Tyree.

163. QUALITATIVE ORGANIC ANALYSIS (6). Prerequisites, Chemistry 61, 62, 63.
*Three lecture and six laboratory hours a week, fall quarter. Laboratory fee. $10.00.* Mr. Bost.

164. QUANTITATIVE ANALYSIS OF FUNCTIONAL GROUPS (3). Prerequisite, Chemistry 163.
*Six laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Messrs. Bost, Roe, McKee.

165. ORGANIC COMBUSTIONS (3). Prerequisite, Chemistry 163.
*Six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Messrs. Bost, Roe.

166a, 167a, 168a. ADVANCED ORGANIC CHEMISTRY I (3 each). Prerequisite or corequisite, Chemistry 163.
*Three hours a week, fall, winter, and spring quarters.* Messrs. Bost, Roe.

166b, 167b, 168b. ADVANCED ORGANIC CHEMISTRY II (3 each). Prerequisite or corequisite, Chemistry 163.
*Three hours a week, fall, winter, and spring quarters.* Messrs. Bost, Roe.

166c, 167c, 168c. ADVANCED ORGANIC PREPARATIONS (3 each). Prerequisite or corequisite, Chemistry 163.
*Six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Messrs. Bost, Roe.

181, 182, 183. PHYSICAL CHEMISTRY (6 each). Prerequisites, Chemistry 31, 41, 42; prerequisites or corequisites, Chemistry 61, 62, 63; prerequisite, satisfactory work in physics and in integral and differential calculus.
*Three lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Messrs. Crockford, Rice.

184, 185, 186. CHEMICAL THERMODYNAMICS (3 each). Prerequisites, Chemistry, 181, 182, 183.
(1950-1951 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Messrs. Crockford, Rice.

187, 188, 189. ADVANCED PHYSICAL CHEMISTRY (3 each). Prerequisites, Chemistry 181, 182, 183.
*Three hours a week, fall, winter, and spring quarters.* Mr. Crockford.

191, 192, 193. INDUSTRIAL CHEMISTRY (3 each). Prerequisites, Chemistry 61, 62, 63.
*Three hours a week, fall, winter, and spring quarters.* Mr. Doak.

194. CHEMISTRY OF POLYMERS (3). Prerequisite, Chemistry 163.
(1950-1951 and alternate years.) *Three hours a week, winter or spring quarter.*

196. EXPERIMENTAL STUDIES IN POLYMER CHEMISTRY (3). Prerequisite, Chemistry 163.
(1950-1951 and alternate years.) *Six laboratory hours a week, winter or spring quarter. Laboratory fee, $10.00.*

## Courses for Graduates

231. DETECTION OF POISONS (6). Prerequisites, Chemistry 31, 42, 61, 62, 63.
(1949-1950 and alternate years.) *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Dobbins.

241, 242, 243. SEMINAR IN ANALYTICAL CHEMISTRY (3 each). Prerequisite or corequisite, Chemistry 143.
(1950-1951 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Mr. Dobbins.

244, 245, 246. SPECIAL TOPICS IN ANALYTICAL CHEMISTRY (3 each). Prerequisites, Chemistry 143, 183.
(1949-1950 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Messrs. Markham, Knight.

251. SEMINAR IN INORGANIC CHEMISTRY (3). Prerequisite, Chemistry 151.
*Three hours a week, fall quarter.* Mr. Edmister.

258, 259. HISTORY OF CHEMISTRY (3 each). Prerequisites, Chemistry 31, 61, 62.
*Three hours a week, winter and spring quarters.* Mr. Edmister.

261, 262, 263. SYNTHETIC ORGANIC COMPOUNDS (3 each). Prerequisites, Chemistry 166a, 167a, 168a or Chemistry 166b, 167b, 168b.
(1950-1951 and alternate years.) *Three hours, or equivalent, a week, fall, winter, and spring quarters.* Messrs. Bost, Roe.

264, 265, 266. SEMINAR IN ORGANIC CHEMISTRY (3 each). Prerequisites, Chemistry 166a, 167a, 168a or Chemistry 166b, 167b, 168b.
(1949-1950 and alternate years.) *Three hours, or equivalent, a week, fall, winter, and spring quarters.* Messrs. Roe, McKee.

267. ORGANIC CHEMISTRY (3 to 6). Prerequisite, to be determined by consultation with professor in charge.
*Three to six hours a week, every quarter. Laboratory fee, to be determined by consultation with professor in charge.* Messrs. Bost, Roe, McKee.

281. ATOMIC AND MOLECULAR CHEMISTRY (3). Prerequisites, Chemistry 181, 182, 183.
*Three hours a week, fall quarter.* Mr. Rice.

282, 283. CHEMICAL BINDING AND VALENCE (3 each). Prerequisite, Chemistry 281.
(1950-1951 and alternate years.) *Three hours a week, winter and spring quarters.* Mr. Rice.

284, 285. STATISTICAL PROBLEMS IN CHEMISTRY (3 each). Prerequisite, Chemistry 281.
(1949-1950 and alternate years.) *Three hours a week, winter and spring quarters.* Mr. Rice.

286, 287, 288. SEMINAR IN PHYSICAL CHEMISTRY (3 each). Prerequisites, Chemistry 181, 182, 183.
*Three hours a week, fall, winter, and spring quarters.* Messrs. Crockford, Rice.

291, 292, 293. ADVANCED TOPICS IN INDUSTRIAL CHEMISTRY (3 each). Prerequisite, Chemistry 163.
(1949-1950 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Mr. Wiley.

RESEARCH COURSES.
*Laboratory fee, $10.00 a course.*

341. ANALYTICAL CHEMISTRY (6).
Messrs. Dobbins, Markham, Knight.

351. INORGANIC CHEMISTRY (6).
Messrs. Edmister, Tyree.

361. ORGANIC CHEMISTRY (6).
Messrs. Bost, Roe, McKee.

381. PHYSICAL CHEMISTRY (6).
Messrs. Crockford, Rice.

391. INDUSTRIAL CHEMISTRY (6).

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## DEPARTMENT OF CITY AND REGIONAL PLANNING

Professors: JOHN ALBERT PARKER, GORDON WILLIAMS BLACKWELL, NICHOLAS JAY DEMERATH, JAMES WILLIAM FESLER
Associate Professors: F. STUART CHAPIN, JR., JAMES MURRAY WEBB
Assistant Professor: MARVIN LEROY GRANSTROM

The work offered in the Department of City and Regional Planning leads to the degree of Master of Regional Planning. The normal course includes five quarters of residence study, an additional quarter of internship, and a thesis.

The following courses are required of all students enrolled in the department: Planning 127, 161, 167 or 215, 170 or 191, 209, 220, 221, 222, 223, 224, 230, 235, 240, 310, and 320. In addition to these requirements four electives are selected from one of the three departments of Economics, Political Science, or Sociology. Lists of courses approved for this curriculum in the three departments will be found on pages 221-22.

Applicants are required to submit a transcript of their undergraduate record and to take a comprehensive aptitude test, the specific form of which is prescribed by the Graduate School in consultation with the department. Undergraduates who expect at a later time to take up the professional study of city and regional planning are advised to specialize in one of the following disciplines during the period of undergraduate training: architecture, economics, engineering, geography, history, landscape architecture, political science, or sociology. Courses in surveying and mechanical drawing, while not prerequisites, are recommended as valuable aids to students in the planning field.

Undergraduates who contemplate entering the department upon graduation are urged to consult with the department with regard to the planning of their undergraduate program.

## Courses for Graduates and Advanced Undergraduates

127. TRANSPORTATION FACILITIES (3).
Highway systems and highway design and construction, traffic surveys and traffic control, airports, railroads, and rapid transit.
*Three hours a week, winter quarter.* Messrs. Hickerson and Webb.

161. THE PRINCIPLES OF SANITATION (Public Health 161) (4).
The course is designed to teach the theory of sanitation and how the environment is shaped to prevent disease and promote man's well-being. A series of practical study problems is worked out by the student to achieve a progressively broadening comprehension of engineering techniques and of the administrative policy of the environmental control of disease. Field trips to water treatment, sewage treatment, and milk pasteurization plants are made.
*Three lecture and two laboratory hours a week, fall quarter.* Messrs. Chanlett and Granstrom.

167. HOUSING AND COMMUNITY DEVELOPMENT (Sociology 167) (5).
An analysis of housing as a factor in social problems, health, general community well-being, and urban and rural community planning and redevelopment. Consideration of related housing problems of consumer needs, production, and distribution. The contributions of specialists in sociology, land economics, public administration, and architecture are studied in relation to these matters. Field trips are arranged from time to time.
*Fall quarter.* Mr. Demerath.

170. ECONOMIC STATISTICS (Economics 170) (6). Prerequisites, Mathematics 7, 9, Economics 31-32 or equivalent.

This course provides training in the important process of statistical technique used by economists and business men. Topics covered include methods of sampling, collection of data, tabular and graphic presentation, frequency distributions, tests of significance, analysis of time series, and simple correlation.

*Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Mr. Cowden.

191. SOCIAL STATISTICS (Sociology 191) (5).

The topics usually covered in an elementary statistics course are treated with emphasis on those best adapted to sociological research. With laboratory materials of a sociological nature, the student in learning the processes of statistical analysis may become familiar with sources, interpretation, and presentation of social data.

*Four lecture and four laboratory hours a week, winter quarter.* Mr. Price.

## Courses for Graduates

209. PLANNING AND GOVERNMENT (Political Science 209) (5).

This course is concerned with the evolution of planning in the United States, the activities of planning agencies, planning problems at various levels of American government, and planning activities in other countries. Special emphasis is given to planning as a governmental process.

*Fall quarter.* Messrs. Fesler, Wager.

215. THEORY OF PLANNING DESIGN (5).

Study and analysis of design theory as applied to problems of site selection and project development.

*Five hours a week, fall quarter.* Messrs. Webb and Parker.

220. PRINCIPLES OF PLANNING DESIGN (5).

An introduction to the principles of site development and construction. The work includes the design and development of land areas. Instruction is given in grading, drainage, and road layout.

*Fall quarter.* Messrs. Webb, Granstrom.

221. URBAN PLANNING RESEARCH (5).

Students collaborate on the preparation of a research study and plan for a new community. The process of study includes analysis of probable social, economic, and physical requirements, selection of the site, and development of the physical plan.

*Winter quarter.* Mr. Webb and representatives of several departments.

222. URBAN PLANNING PRACTICE (5).

The study of an existing community. The student conducts a survey of existing social, economic, and physical conditions, determines the needs of the area in terms of physical development, formulates proposals for alternative solutions of problems, and prepares a program for the encouragement of citizen participation and governmental support for planning.

*Spring quarter.* Messrs. Webb, Parker, Chapin, and representatives of several departments.

223. ADVANCED PLANNING DESIGN (5). Prerequisite, Planning 220.

Studies of specific problems and areas in urban centers such as residential, commercial or industrial slums, outlying and central business areas, industrial improvement districts, etc. Areas are selected and studied in the field; essential social, economic, and physical characteristics and plan requirements are deter-

mined; and a redevelopment or improvement program is developed on the basis of the student's design.

*Winter quarter.* Mr. Chapin.

224. STATE AND REGIONAL PLANNING (5).

Research on and analysis of state and regional problems and planning.

*Winter quarter.* Mr. Blackwell.

230. PLANNING LEGISLATION AND ADMINISTRATION (3).

Enabling legislation for planning: urban, rural, and county zoning; subdivision and other land use controls; urban redevelopment law; housing legislation; and limited access highway legislation.

*Three hours a week, winter quarter.* Institute of Government.

235. URBAN PLANNING METHODS AND TECHNIQUES (3).

Analysis and evaluation of methods and techniques employed in developing a comprehensive plan for an urban area.

*Three hours a week, spring quarter.* Mr. Chapin.

240. PLANNING INTERNSHIP (5). Prerequisite, six required courses in the City and Regional Planning curriculum.

One quarter's work in an approved planning office or agency under competent supervision. During this period the student is required to submit monthly reports to the head of the department.

*Any quarter.* Mr. Parker.

310. PLANNING RESEARCH SEMINAR (5).

Field research and study on selected planning problems under special guidance of a member of the staff.

*Any quarter.* Mr. Chapin and representatives of several departments.

320. THESIS (5).

Study and presentation of a planning project selected by the student and approved by the department. Credit is given for this course upon acceptance of the thesis.

Members of the Department of City and Regional Planning.

## Approved Courses from Which the Four Departmental Electives May Be Selected

*Department of Economics*

111. Resources and Technics

124. Principles of Marketing

131. Economic Theory

135. Economic History

141. Public Finance

143. Problems in State and Local Finance

151. Transportation

153. Public Utilities

168. Sales and Market Analysis

179. Governmental Accounting

399. Seminar

*Department of Political Science*

101. Public Administration
132. Municipal Government in the United States
133. Municipal Administration in the United States
181. Recent National Policy and Administration
191. Public Finance
193. Problems in State and Local Finance
210. Public Administration of Resources
225. Administrative Organization and Management
331. Problems in Public Administration
341. Seminar Course

*Department of Sociology*

110. Rural Land Planning and Land Economics
153. Social Structure
154. Contemporary Society
168. The City
169. The Industrial Community
173. Community Recreation
174. Community Leadership
181. Regional Sociology of the South
186. Population
197. Population Statistics
218. Human Ecology
301, 302, 303. Graduate Research Seminar

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## DEPARTMENT OF CLASSICS

Professors: B. L. ULLMAN, J. P. HARLAND, P. H. EPPS, WALTER ALLEN, JR.
Associate Professor: A. I. SUSKIN
Part-time Instructors: HUBERT H. HARPER, JR., HELEN LANNEAU MOORE, FRANCIS L. NEWTON, PAUL PASCAL
Teaching Fellow: PRISCILLA W. SUTHERLAND
Graduate Assistant: ANNA LYDIA MOTTO

### GREEK

Students interested in having their undergraduate major in Greek should consult the department in the last quarter of their sophomore year. Six courses are required in addition to Greek 4.

## Courses for Undergraduates

1-2. ELEMENTARY GREEK (5 each).
*Fall and winter quarters.* Mr. Epps.
NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

*3-4. INTERMEDIATE GREEK (5 each).
*Spring and fall quarters.* Mr. Epps.
NOTE: Majors in Religion may substitute 3N (Elementary New Testament).

14. ELEMENTARY GREEK FOR GRADUATE STUDENTS (No credit).
*One quarter.* Mr. Epps.

*21-22. ADVANCED GREEK (5 each). Prerequisite, Greek 4 or equivalent.
*Winter and spring quarters.* Mr. Epps.
NOTE: Students so desiring may substitute Greek 88 for Greek 21 or 22.

80. HOMER, ILIAD (5). Prerequisite, Greek 22 or equivalent.
*One quarter.* Mr. Epps.

82. PLATO (5). Prerequisite, Greek 22 or equivalent.
*One quarter.* Mr. Epps.

88. GREEK NEW TESTAMENT (5). Prerequisite, Greek 4 or equivalent.
*One quarter.* Mr. Epps.

## Courses for Graduates and Advanced Undergraduates

112. HOMER, ODYSSEY (5). Prerequisite, Greek 22 or equivalent.
*One quarter.* Mr. Epps.

153. GREEK TRAGEDY (in Greek) (5). Prerequisite, Greek 22 or equivalent.
*Spring quarter.* Mr. Epps.

154. GREEK COMEDY (in Greek) (5). Prerequisite, Greek 22 or equivalent.
*One quarter.* Mr. Epps.

158. GREEK NEW TESTAMENT (5). Prerequisite, Greek 22.
*Winter quarter.* Mr. Epps.

171. GREEK HISTORIANS (5). Prerequisite, Greek 22 or equivalent.
*Spring quarter.* Mr. Epps.

181. GREEK ORATORS (5). Prerequisite, Greek 22 or equivalent.
*One quarter.* Mr. Epps.

182. PLATO (5). Prerequisite, Greek 22 or equivalent.
*Fall quarter.* Mr. Epps.

For additional courses see below under Courses Requiring No Knowledge of the Greek or Latin Language and under Comparative Literature. Attention is called also to courses in the Department of Comparative Linguistics.

*Either of these courses may be taken separately for elective credit.

## LATIN

Students interested in having their undergraduate major in Latin should consult the department in the last quarter of their sophomore year. Six courses are required in addition to Latin 22.

### Courses for Undergraduates

1-2. ELEMENTARY LATIN (5 each).
1: *Fall, winter, and spring quarters.* 2: *Fall, winter, and spring quarters.* Messrs. Harper, Newton, Pascal; Miss Sutherland, Mrs. Moore.
NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

*3-4. INTERMEDIATE LATIN (5 each).
Freshman and sophomore elective.
3: *Fall, winter, and spring quarters.* 4: *Fall, winter, and spring quarters.* Messrs. Suskin, Newton; Miss Sutherland, Mrs. Moore.
NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

14. RAPID READING IN LATIN (5).
May be taken with or without credit by those who wish to refresh their ability to read Latin prose. Class needs will determine selection of authors.
*One quarter.* Mr. Allen.

21-22. ADVANCED LATIN (5 each). Prerequisite, three or four units of high school Latin, or Latin 3-4.
Freshman and sophomore elective.
Selections from Latin prose, chiefly Livy and Horace.
21: *Fall and spring quarters;* 22: *Winter quarter.* Messrs. Allen, Suskin.

51. CICERO'S LETTERS (5). Prerequisite, Latin 22.
*Fall quarter.* Mr. Allen.

52. ROMAN SATIRE (5). Prerequisite, Latin 22.
*Winter quarter.* Mr. Suskin.

53. LATIN LYRIC POETRY (5). Prerequisite, Latin 22.
*Spring quarter.* Mr. Suskin.

71. COURSE FOR TEACHERS (5). Prerequisite, Latin 22.
*On application.* Mr. Ullman.

NOTE: Courses in Directed Teaching of High School Latin and in Materials and Methods of Teaching High School Latin will be found under the School of Education.

### Courses for Graduates and Advanced Undergraduates

101. ROMAN HISTORICAL LITERATURE, TACITUS (5). Prerequisite, Latin 22.
*One quarter.* Mr. Allen.

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*Either of these courses may be taken separately for elective credit.

102. ROMAN DRAMATIC LITERATURE, PLAUTUS AND TERENCE (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

103. PROSE WRITINGS OF THE REPUBLIC (5). Prerequisite, Latin 22.
*One quarter.* Mr. Suskin.

104. CICERO: POLITICAL CAREER AND WORKS (5). Prerequisite, Latin 22.
The course will deal with Cicero's *Letters* or *Orations,* as determined by the needs of the class.
*One quarter.* Mr. Allen.

105. THE SATIRES OF JUVENAL (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

106. LUCRETIUS (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

107. LATIN COMPOSITION (5). Prerequisite, Latin 22.
*Winter quarter.* Mr. Allen.

108. MARTIAL (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

109. CICERO: PHILOSOPHICAL WORKS (5). Prerequisite, Latin 22.
*Spring quarter.* Mr. Ullman.

110. MEDIEVAL LATIN (5). Prerequisite, Latin 22.
Reading of selections from representative writers in prose and poetry.
*One quarter.* Mr. Ullman.

112. ROMAN ELEGY (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

113. LIVY (5). Prerequisite, Latin 22.
*One quarter.* Mr. Suskin.

117. VIRGIL (5). Prerequisite, Latin 22.
*One quarter.* Mr. Ullman.

121. PETRONIUS (5).
The relation of Petronius to satire and to development of the novel; introduction to Vulgar Latin. *One quarter.* Mr. Ullman.

131. LATIN WRITERS OF THE ITALIAN RENAISSANCE (5). Prerequisite, Latin 22.
Reading of selections beginning with Petrarch, with some consideration of the origin of the Renaissance.
*Fall quarter.* Mr. Ullman.

## Courses for Graduates

202. LATIN EPIGRAPHY (5).
*One quarter.* Mr. Ullman.

203. LATIN PALEOGRAPHY (5).
*One quarter.* Mr. Ullman.

301-302-303. LATIN SEMINAR (5 each).
*Fall, winter, and spring quarters.* Mr. Ullman.

310. THESIS COURSE (5).
*Any quarter.* Mr. Ullman.

## CLASSICS

### (Courses Requiring No Knowledge of the Greek or Latin Language)

The following courses in classical literature and civilization are especially designed to supply the necessary foundation for those who, without a reading knowledge of the ancient languages, wish a broader culture, or plan to specialize in modern literature, history, art, etc. When properly approved, they will be allowed to count as part of the major requirement in other departments. They may be taken also to satisfy the requirements of a minor in literature. Courses 61 and 62 may be substituted for English 3 and 4 by students taking a modern foreign language. See also under Comparative Literature.

### Courses for Undergraduates

61. GREEK LITERATURE (5).
A survey of the major authors and their contributions to modern thought and literary forms.
*Fall and spring quarters.* Messrs. Epps and Allen.

62. LATIN LITERATURE (5).
A survey of the major authors and their contributions to modern thought and literary forms.
*Winter quarter.* Mr. Suskin.

75. GREEK CIVILIZATION (5).
The achievements of the ancient Greeks and their contributions to the modern world in art, architecture, medicine, science, politics, education, theater, religion, etc.
*Winter quarter.* Mr. Harland.

76. ROMAN CIVILIZATION (5).
Roman public and private life, manners, and ideals; buildings, living conditions, commerce, religion, government, art, etc.
*Spring quarter.* Mr. Allen.

77. GREEK MYTHOLOGY (5).
An introduction to mythology, followed by a study of the various cycles of myths which developed in ancient Greece. Illustrations from sculpture and vase-paintings.
*One quarter.* Mr. Harland.

85. ARCHAEOLOGY AND THE BIBLE (5).
Biblical history in the light of excavations in Palestine and the ancient Near East. The art and civilization of the peoples of the Old Testament.
*Fall quarter.* Mr. Harland.

91. ARCHAEOLOGY OF THE NEAR EAST (5).
The art and architecture of Egypt, Mesopotamia, and the rest of the ancient Near East.
*Fall quarter.* Mr. Harland.

92. GREEK ARCHAEOLOGY (5).
The historical development of the art of Greece from the Bronze Age through the historical period. Greek architecture, painting, and the other arts.
*Winter quarter.* Mr. Harland.

93. GREEK SCULPTURE (5).
The development of Greek sculpture as one phase of the civilization of the ancient Hellenes.
*Spring quarter.* Mr. Harland.

95. ANCIENT ARCHITECTURE (5).
The architecture of Egypt, Mesopotamia, Greece, and Rome, with emphasis on the contributions made by these lands to modern architecture.
*Spring quarter.* Mr. Harland.

97. ROMAN ART (5).
The arts of Rome, particularly architecture, sculpture, and painting, preceded by a survey of Etruscan and Hellenic art and their influence on Rome.
*Spring quarter.* Mr. Harland.

## Courses for Graduates and Advanced Undergraduates

103. GREEK AND ROMAN EPIC (5).
Reading of the ancient epics, with emphasis on Homer and Virgil. Structure of the poems, history of epic as a literary form, the poems as expressions of the spirit of their ages.
*Spring quarter.* Mr. Allen.

107. GREEK DRAMATIC LITERATURE (5).
Reading of about fifteen Greek plays. Origin and growth of the Greek theatre and drama; Aristotle's Poetics; literary quality of the plays; religious, social, and political ideas of the fifth century B. C.
*Fall quarter.* Mr. Allen.

109. GREEK AND ROMAN HISTORICAL LITERATURE (History 109) (5).
The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others, with consideration of their literary qualities and their reliability as historians.
*Winter quarter.* Mr. Allen.

114. GREEK AND ROMAN COMEDY (5).
*One quarter.* Messrs. Epps, Allen.

176. ROMAN CIVILIZATION (5).
*One quarter.* Mr. Allen.

193. HELLENIC ART (5). Prerequisite, Archaeology 92 or 93, or Greek 75, or Greek history.
*One quarter, on application.* Mr. Harland.

195. THE AEGEAN CIVILIZATION (5). Prerequisite, Archaeology 91, or ancient history.
*One quarter, on application.* Mr. Harland.

## Courses for Graduates

211. ARCHAEOLOGY: TOPOGRAPHY OF ATHENS, OLYMPIA, AND DELPHI (5). Ability to read Greek desirable.
*One quarter, on application.* Mr. Harland.

291. ARCHAEOLOGY OF THE ANCIENT NEAR EAST (5). Prerequisite, Archaeology 91, or courses in ancient history of the Near East.
*One quarter, on application.* Mr. Harland.

292. HELLENIC ARCHITECTURE (5). Prerequisite, Archaeology 91 or 92 or 93 or ancient history.
*One quarter, on application.* Mr. Harland.

293. HELLENIC SCULPTURE (5). Prerequisite, Archaeology 92 or 93, or Greek 75, or ancient history.
*One quarter, on application.* Mr. Harland.

298. ROMAN ARCHAEOLOGY (5). Prerequisite, Archaeology 91, 92, 93.
*One quarter, on request.* Mr. Harland.

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## COMMERCE

(See Economics and Commerce)

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## CURRICULUM IN COMPARATIVE LINGUISTICS

DEAN W. W. PIERSON, *Chairman*

Professors: G. S. LANE, *Secretary,* U. T. HOLMES, N. E. ELIASON, R. S. BOGGS, R. W. LINKER

This curriculum intends to organize the facilities for the study of comparative linguistics which are already offered by the various departments of the University in the form of historical and comparative grammar courses; and, in addition, it fills certain gaps which would otherwise obviously present themselves to a graduate student who might desire to devote himself seriously to any particular branch of Indo-European linguistics. Under special circumstances, after consultation with the secretary of the curriculum, an undergraduate major is allowed.

Students with an undergraduate major in any department of language and literature are eligible to take work in this curriculum with a view to becoming candidates for higher degrees. A reading knowledge of French and German and one classical language is required of candidates for higher degrees in comparative linguistics. From both a cultural and practical viewpoint, it is advisable that a student should not detach his linguistic studies too completely from those in literature.

The curriculum draws upon the library facilities, as well as the faculties, of the departments in language of the University. These include the essential handbooks, monographs, and linguistic periodi-

cals of the special fields. In addition, through recent appropriations for linguistics, fundamental works in Sanskrit, Slavic, and the more general aspects of Indo-European comparative grammar have been acquired.

Attention is called to courses in paleography and epigraphy in the Department of Classics for which credit in linguistics may be given under particular circumstances.

## General

101. INTRODUCTION TO THE STUDY OF LANGUAGE (5). Prerequisites, one classical language and one modern language.
*Spring quarter.* Mr. Lane.

103. THE INDO-EUROPEANS (5).
*One quarter, on demand.* Mr. Lane.

105. CELTIC: OLD IRISH (5). See under Romance Languages (French).
*Winter quarter.* Mr. Holmes.

106. CELTIC: WELSH (5).
*One quarter, on demand.* Mr. Holmes.

111, 112, 113. SANSKRIT (5 each).
*Through the year.* Mr. Lane.

201, 202, 203. ADVANCED SANSKRIT (5 each).
*Through the year, on demand.* Mr. Lane.

204. COMPARATIVE GRAMMAR OF GREEK AND LATIN (5).
*Five hours a week, winter quarter, on demand.* Mr. Lane.

206. LITHUANIAN (5).
*Winter quarter, on demand.* Mr. Lane.

207. CHURCH SLAVIC (5).
*Spring quarter, on demand.* Mr. Lane.

361, 362, 363. SEMINAR IN LINGUISTICS (5 each).
*Through the year.* Staff.

## English Linguistics

101. OLD ENGLISH GRAMMAR AND READING (5).
*Fall quarter.* Mr. Eliason.

201. BEOWULF (5).
*Winter quarter.* Mr. Eliason.

202. MIDDLE ENGLISH (5).
*Spring quarter.* Mr. Coffman (of the Department of English).

204. HISTORY OF THE ENGLISH LANGUAGE (5). Prerequisite, English 101 or permission of the instructor.
*Spring quarter.* Mr. Eliason.

## Germanic Linguistics

161. HISTORY OF THE GERMAN LANGUAGE (German 161) (5).
*Fall quarter, on demand.* Mr. Lane.

221. GOTHIC (German 221) (5).
*Fall quarter.* Mr. Lane.

222. OLD HIGH GERMAN (German 222) (5).
*Winter quarter.* Mr. Lane.

223. COMPARATIVE GERMANIC GRAMMAR (German 223) (5).
*Spring quarter.* Mr. Lane.

232. OLD SAXON (German 232) (5).
*One quarter, on demand.* Mr. Lane.

233, 234. OLD NORSE (German 233, 234) (5 each).
*Two quarters, on demand.* Mr. Lane.

235, 236. MIDDLE HIGH GERMAN (German 235, 236) (5 each).
*Two quarters, on demand.* Mr. Jente.

## Romance Linguistics

126. HISTORY OF THE FRENCH LANGUAGE (5). Prerequisite, French 72.
*Winter quarter.* Messrs. Holmes, Linker.

220. VULGAR LATIN (5).
*Five hours a week, spring quarter.* Mr. Holmes.

221, 222, 223. OLD FRENCH (5 each).
*Fall, winter, and spring quarters.* Mr. Holmes.

225. PROVENÇAL (5).
*Spring quarter.* Mr. Holmes.

221. OLD ITALIAN (5).
*Fall quarter.* Mr. Holmes.

221, 222. OLD SPANISH (5 each).
*Fall and winter quarters.* Mr. Boggs.

221. OLD PORTUGUESE (5).
*Fall quarter.* Mr. Holmes.

370. MINOR ROMANCE TONGUES (5).
*Five hours a week, spring quarter, on demand.* Mr. Holmes.

## DEPARTMENT OF COMPARATIVE LITERATURE

Professors: H. R. HUSE, *Acting Chairman*, G. R. COFFMAN, U. T. HOLMES, JR., C. P. LYONS, A. C. HOWELL, R. P. BOND, S. A. STOUDEMIRE, W. L. WILEY, P. H. EPPS, R. S. BOGGS, WALTER ALLEN, SR.
Associate Professors: W. P. FRIEDERICH, R. W. LINKER, A. I. SUSKIN, KAI JURGENSEN

An undergraduate major in the department consists normally of six to eight courses, two of which must be in the classics. Students are encouraged to substitute courses in the original languages whenever possible.

### Literature in English Translation

### Courses for Undergraduates

61. GREEK LITERATURE (5).
A survey of the major authors and their contributions to modern thought and literary forms.
*Fall and spring quarters.* Mr. Epps.

62. LATIN LITERATURE (5).
A survey of the major authors and their contributions to modern thought and literary forms.
*Winter quarter.* Mr. Suskin.

65. ORIENTAL LITERATURE (5).
A rapid survey of interesting features in the literature, language, and civilization of China, Japan, India, and Arabia.
*Spring quarter.* Mr. Holmes.

87. LITERARY ASPECTS OF THE BIBLE (Religion 87) (5).
The Old and New Testatments will be taken up in alternate years.
*Spring quarter.* Mr. Howell.

### Courses for Graduates and Advanced Undergraduates

117. CERVANTES (5).
A study of Cervantes' *Don Quixote* and the *Exemplary Novels.*
*Winter quarter.* Mr. Stoudemire.

135. FRENCH CLASSICISM (5).
A survey of the origins of classicism in France. The plays of Corneille, Molière, Racine, and their contemporaries. The decline of classicism.
*Spring quarter.* Mr. Wiley.

137. SURVEY OF GERMAN LITERATURE (5).
German literature of the past 1000 years, with special emphasis on the periods around 1200, 1800, and 1920.
*Fall quarter.* Mr. Friederich.

155. GOETHE (5).
Goethe's life and works placed against a background of European classicism and romanticism.
*Spring quarter.* Mr. Friederich.

156. DANTE (5).
The beginnings of Italian literature. The *Vita Nuova* and *The Divine Comedy.*
*Winter quarter.* Mr. Huse.

## Comparative Courses

### Courses for Graduates and Advanced Undergraduates

103. GREEK AND ROMAN EPIC (5).
Reading of the ancient epics with emphasis on Homer and Virgil. Structure of the poems, history of the epic as a literary form, the poems as expressions of the spirit of their ages.
*Spring quarter.* Mr. Allen.

107. GREEK DRAMATIC LITERATURE (5).
Reading of about fifteen Greek plays. Origin and growth of the Greek theater and drama; Aristotle's *Poetics;* literary quality of the plays; religious, social, and political ideas of the fifth century B. C.
*Fall quarter.* Mr. Allen.

109. GREEK AND ROMAN HISTORICAL LITERATURE (5).
The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others, with consideration of their literary qualities and their reliability as historians.
*Winter quarter.* Mr. Allen.

162. MODERN CONTINENTAL DRAMA (5).
A study of representative plays of the modern period from Ibsen to Sartre.
*Winter quarter.* Mr. Jurgensen.

163. LITERARY CRITICISM (5).
The principles which have animated classical, romantic, and realistic literature.
*Fall quarter.* Mr. Bond or Mr. Lyons.

170. THE MIDDLE AGES (5).
A survey of Medieval France, England, Germany, Spain, Italy, and Byzantium, from the viewpoints of civilization, art, and literature.
*Spring quarter.* Mr. Linker.

173. MEDIEVAL ROMANCE (5).
A survey of romance materials in English literature, with particular attention to the Arthurian tradition.
(Not offered in 1949-1950.) Mr. Coffman.

175. RENAISSANCE AND BAROQUE. (5).
The period from Dante to Calderon with special emphasis on Italian and Spanish contributions.
*Winter quarter.* Mr. Friederich.

177. CLASSICISM AND PRE-ROMANTICISM (5).
The period from the French school of 1660 to the German *Sturm und Drang,* with special emphasis on French and English contributions.
*Spring quarter.* Mr. Friederich.

185. INTRODUCTION TO FOLKLORE (5).
Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.
*Fall quarter.* Mr. Boggs.

201. PROBLEMS AND METHODS IN COMPARATIVE LITERATURE (5).
The growth of comparative scholarship since 1800. Bibliography, Thematology, Influences, Parallelisms, *Zeitgeist,* and other modes of investigation.
*Fall quarter.* Mr. Friederich.

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## DEPARTMENT OF DRAMATIC ART

Professors: SAMUEL SELDEN, R. B. SHARPE, EARL WYNN, H. E. DAVIS, J. W. PARKER
Associate Professor: KAI JURGENSEN
Assistant Professors: R. L. GAULT, FOSTER FITZ-SIMONS, ROBERT SCHENKKAN, EDWARD FREED, ARTHUR V. BRISKIN
Instructors: IRENE SMART, RHODA HUNTER
Visiting Lecturer: WALTER PRICHARD EATON
Assistants: FRANCIS M. CASEY, SUZANNE M. DAVIS, MARTHA G. HARDY, GERALD L. HONAKER, GEORGE W. MCKINNEY, MARK R. SUMNER, NATHANIEL S. WHITE, JR.

Admission to the Department of Dramatic Art presupposes the completion of the work of the General College in this institution or of equivalent work done elsewhere.

The courses in the Department of Dramatic Art are designed to give the student a comprehensive knowledge of the literature of the drama and intensive training in all phases of theatre work, from the writing of the play to the complete presentation before an audience.

Intensive study and research in all phases of dramatic art are made effective through introductory and advanced lecture courses, the seminar, and supervised practice work in theatre technique. The library resources for the student of dramatic literature and of the history of the theatre include a large and constantly increasing collection of critical and technical works and plays of all periods.

Practical training for the student of playwriting, acting, directing, and technical work is provided by the production unit of the Department of Dramatic Art, The Carolina Playmakers. The Playmakers Theatre building, the Koch Memorial Forest Theatre, and the scene shop furnish ample opportunity for the student to test theory with practice, in both experimental and major performances.

*Requirements for a Major:* A student choosing dramatic art as his major field should take a minimum of eighteen full courses distributed as follows:

Seven to ten courses in dramatic art:

One course in Voice Training (40).

One course in Technical Laboratory (69).

One course in Shakespeare in the Theatre (150).

At least two courses in dramatic literature from History of the Theatre (160), Continental Drama before Ibsen (161), Modern Continental Drama (162), British and American Drama of the Twentieth Century (164).

At least two courses in theatre arts from 57, 61, 63, 64, 65, 66, 67, 70, 71, 74, 75, 85, 90, 155, 156, 157, and 193.

Four to seven courses in allied departments of the Division of the Humanities, to be taken after conference with the departmental adviser.

Four to seven courses from other divisions.

Students interested in reading for honors in drama should consult the regulations governing the honors program of the Division of the Humanities.

Students who plan to take graduate work must include in their undergraduate program one course in playwriting and one in acting. Those who intend to take the advanced course in Staging Methods (202) should see the prerequisites for that course.

## Courses for Undergraduates

40. VOICE TRAINING (English 40) (5). Open to dramatic art majors only.
Improvement of the voice as a speaking and reading instrument and the study and application of a true American diction.
*Three lecture and four laboratory hours a week, winter quarter. Fee for materials, $1.50.* Mr. Wynn.

50. DIRECTED READINGS (5). Only for graduate transfer students needing to make up undergraduate deficiencies in the department.
Assigned readings in a selected field of dramatic literature. Mr. Jurgensen.

57. THE DANCE (5). Open for credit to dramatic art majors only.
A study of the cultural development of the Dance and its relation to the other arts from the beginning to the present time, with practical training in fundamental techniques.
*Two lecture and six laboratory hours a week, fall or winter quarter. Fee for materials, $3.00.* Mr. Fitz-Simons.

61. ACTING (5). Registration is limited to 20.
A study of fundamental principles and practice for the actor.
*Fall or winter quarter. Fee for materials, $2.00.* Mr. Fitz-Simons.

63. PLAY DIRECTION (5). Prerequisite, Dramatic Art 61.
Registration is limited. Before registering for this course, students must secure the permission of Professor Fitz-Simons. Students training for teaching who wish to take this course to complete a minor program in dramatic art should consult

their advisers. (A student cannot receive degree credit for both this course and Dramatic Art 193.)

The theory and practice of play directing.

*Spring quarter. Fee for materials, $2.00.* Mr. Fitz-Simons.

*64. SCENERY CONSTRUCTION AND PAINTING (5).

Elementary theory and practice in the construction and painting of scenery for the stage.

*Three lecture and four laboratory hours a week, fall quarter. Fee for materials, $2.00.* Mr. Davis.

*65. STAGE LIGHTING (5).

Elementary theory and practice in stage lighting, including the choice of equipment and its control in the theatre.

*Three lecture and four laboratory hours a week, winter quarter. Fee for materials, $2.00.* Mr. Davis.

*66. STAGE DESIGN (5). Prerequisite, Dramatic Art 64.

The history of, and elementary theory and practice in, the designing of scenery for the stage, through the preliminary sketch, the model, and the working drawings.

*Spring quarter. Fee for materials, $2.00.* Mr. Gault.

67. COSTUMING (5).

The designing and making of stage costumes with some consideration of make-up.

*One lecture and eight laboratory hours a week, spring quarter. Fee for materials, $2.00.* Mrs. Smart.

69. TECHNICAL LABORATORY (5).

Required of all majors in the Department of Dramatic Art, and limited to them.

Practical technical work on the stage and in the scene and costume shops.

*One lecture and eight laboratory hours a week, fall or winter or spring quarter.* Messrs. Davis and Gault and Mrs. Smart.

70. INTRODUCTION TO RADIO (Radio 70) (5).

A survey course covering the organization and operation of stations and networks, participating organizations, the audience, the program, the servicing of programs, and broadcasting to schools.

*Fall or winter quarter. Fee for materials, $2.00.* Miss Hunter and guest lecturers.

71. SPEAKING AND ACTING FOR THE MICROPHONE (Radio 71) (5). Open to dramatic art, radio and journalism majors only.

An introduction to speaking and acting for an aural medium; lectures, discussion, and laboratories.

*Three lecture and four laboratory hours a week, winter or spring quarter. Fee for materials, $2.00.* Mr. Wynn.

74. DRAMATIC SCRIPT-WRITING FOR RADIO (Radio 74) (5). Open to dramatic art, radio, and journalism majors only.

A study of some basic forms of radio unit drama, including dramatic-narrative and documentary drama, both original and in adaption.

*Winter or spring quarter.* Mr. Schenkkan.

75. RADIO PRODUCTION (Radio 75) (5). Open to dramatic art, radio, and journalism majors only. Prerequisite, Dramatic Art 70 or 71.

A study of the principles and methods of direction and production of talk,

*Those enrolled will be expected to assist with the technical work in the productions of The Carolina Playmakers.

musical, and simple dramatic programs with emphasis on those basic principles which underlie all radio directing.

*Three lecture and four laboratory hours a week, fall or spring quarter. Fee for materials, $2.00.* Mr. Young.

85. ELEMENTARY MOTION PICTURE PRODUCTION (5).

Registration is limited to 15 and restricted to dramatic art and radio majors. Before registering for this course, students must secure the permission of Professor Freed.

An elementary course dealing with the basic principles of writing, producing and directing the sound screen play.

*Three lecture and four laboratory hours a week, fall quarter. Fee for materials, $5.00.* Mr. Freed.

86. MOTION PICTURE LABORATORY (Radio 86) (3). Prerequisite, Dramatic Art 85.

Registration is limited to 10 and restricted to dramatic art and radio majors who have completed Dramatic Art 85 with distinction. Students must secure the permission of Professor Freed before registering.

This course is a laboratory continuation of Dramatic Art 85, designed for those students who have shown outstanding promise. It requires actual participation on the part of the student in writing and directing films produced by the Communication Center.

*Six laboratory hours a week, winter quarter. Fee for materials, $10.00.* Mr. Freed.

90. ELEMENTARY TELEVISION WRITING AND PRODUCTION (5). Prerequisites, Dramatic Art 70, 71, and 75.

Registration is limited to 20 and restricted to senior dramatic art and radio majors. Students must secure the permission of Professor Wynn before registering.

This course surveys the Television industry and emphasizes specifically current and experimental methods of Television writing and production.

*Three lecture and four laboratory hours a week, spring quarter. Fee for materials, $10.00.* Department of Radio staff.

## Courses for Graduates and Advanced Undergraduates

150. SHAKESPEARE IN THE THEATRE (5).

A study of the literary and stage history of about 12 representative plays.

*Winter quarter.* Mr. Jurgensen.

155. PLAYWRITING AND EXPERIMENTAL PRODUCTION I (5).

A practical course in playwriting and the experimental production of stage plays.

*Fall quarter. Fee for experimental production, $3.00.* Messrs. Eaton, Selden, Davis, Parker, Jurgensen.

156. PLAYWRITING AND EXPERIMENTAL PRODUCTION II (5).

The principles of dramatic construction and practice in the writing and production of one-act plays.

*Winter quarter. Fee for experimental production, $3.00.* Messrs. Eaton, Selden, Parker, Jurgensen.

157. PLAYWRITING AND EXPERIMENTAL PRODUCTION III (5).

Practice in writing one-act and full-length plays for the stage with experimental and public productions.

*Spring quarter. Fee for experimental production, $3.00.* Messrs. Selden, Davis, Parker, Jurgensen.

160. HISTORY OF THE THEATRE (5).
A study of the development of the theatre, its place in the history of civilization and its changing relations to social conditions.
*Spring quarter.* Mr. Jurgensen.

161. CONTINENTAL DRAMA BEFORE IBSEN (5).
A general survey of the drama and the theatre from Aeschylus to Goethe.
*Fall quarter.* Mr. Jurgensen.

162. MODERN CONTINENTAL DRAMA (Comparative Literature 162) (5).
A study of representative plays of the modern period from Ibsen to Sartre.
*Winter quarter.* Mr. Jurgensen.

164. BRITISH AND AMERICAN DRAMA OF THE TWENTIETH CENTURY (English 164) (5).
A survey of dramatic movements and writers from 1900 to the present.
*Spring quarter.* Mr. Sharpe.

193. TEACHING DRAMATIC ART (5).
An intensive study of the theory and practice of play production and the organization of dramatic programs and courses, for high school teachers. (A student who has already taken Dramatic Art 63 cannot receive degree credit for this course.)
*Spring quarter. Fee for materials, $2.00.* Mr. Parker.

## Courses for Graduates

201. PLAY DIRECTING, ADVANCED (5). Prerequisites, Dramatic Art 61 and 63, or equivalent training in acting and directing.
Theory and practice in the training of actors and in directing.
*Spring quarter. Fee for materials, $3.00.* Mr. Selden.

202. STAGING METHODS (5). Prerequisites, Dramatic Art 64, 65, 66, and a course in freehand drawing and painting or equivalent training in designing and technical practice.
Advanced work in the designing and planning of stage scenery and lighting and in theatre engineering.
*Winter quarter. Fee for materials, $2.00.* Mr. Davis.

203. TECHNICAL PROBLEMS IN PLAYWRITING (5). Prerequisite, Dramatic Art 155, 156 or 157.
An advanced course in the principles of writing the full-length play. A study of the organization of materials, the development of the scenario, and the preparation of the completed script.
*Winter quarter.* Mr. Eaton.

210. THEATRE ADMINISTRATION (5). Open to selected dramatic art majors only.
A study of practical problems of organization, management, and promotion, especially in the regional theatres.
*Winter quarter.* Mr. Parker.

299. THEATRE WORKSHOP (3 to 12 hours course credit, not toward a degree).
Open to a limited number of qualified students who have already secured a bachelor's or master's degree. Before registering for this course, students must have the special permission of the head of the department.
The staff of The Carolina Playmakers.

325. SEMINAR IN MODERN DRAMA (English 325) (5).
Research in dramatic literature, theatrical history, and staging methods.
*Fall quarter.* Messrs. Sharpe, Selden.

340. SPECIAL READINGS (5).
Research in a special field of modern drama or the history of the theatre. This course may not be repeated for credit. Mr. Selden.

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## DEPARTMENT OF ECONOMICS AND COMMERCE

Professors: J. B. WOOSLEY, D. D. CARROLL, E. E. PEACOCK, R. J. M. HOBBS, C. P. SPRUILL, G. T. SCHWENNING, CLARENCE HEER, H. D. WOLF, D. H. BUCHANAN, M. S. HEATH, D. J. COWDEN, R. S. WINSLOW, *J. M. LEAR, R. P. CALHOON, P. N. GUTHRIE, C. H. MCGREGOR, J. E. DYKSTRA, C. S. LOGSDON

Associate Professors: O. T. MOUZON, C. C. CARTER, F. J. KOTTKE, A. G. SADLER, C. A. KIRKPATRICK, J. C. D. BLAINE, †G. E. LENT, G. A. BARRETT, J. T. O'NEIL, CLARENCE PHILBROOK, R. W. CRUTCHFIELD, L. D. ASHBY, D. M. MCGILL, R. L. STALLINGS, JR.

Assistant Professors: R. Y. DURAND, T. M. STANBACK, JR., R. L. BUNTING, K. R. DAVIS

Acting Assistant Professor: A. M. WHITEHILL, JR.

Lecturers: ‡F. GUTMANN, J. S. FLOYD, A. W. PIERPONT, G. M. WOODWARD, M. A. HARTMAN, R. W. PFOUTS

Part-time Lecturers: R. C. WADE, G. O. HAMRICK

Instructors: L. A. BARCLAY, E. W. SCHADT

Part-time Instructors: I. C. CASTLES, A. C. FLORA, JR., O. T. HANNA, JR., J. E. HIBDON, H. H. MITCHELL, J. M. PARRISH, W. L. PENDERGRAPH, I. N. REYNOLDS, J. M. RYAN, J. H. D. SPENCER

Teaching Fellows: W. D. MAXWELL, E. P. TRUEX

For the degree of A.B. with a major in economics:

1. Six (6) full quarter advanced courses in economics, including Economics 81 and Economics 170 are required; and seven (7) full quarter advanced courses in economics may be taken.

a) Economics 31 and 32 should be taken while in the General College, as these basic courses are prerequisites for the six (6) required advanced courses. A grade of C or better in Economics 31 and 32 is required as a condition of admission to a program leading to a major in Economics.

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*Professor Emeritus.
†Absent on leave, 1949-1950.
‡Lecturer Emeritus.

b) Mathematics 7 and 9 or R, 7x, and 9 should be taken while in the General College as these courses are prerequisites for Economics 170. In special cases Mathematics 8 may be substituted for Mathematics 9.

c) Economics 41 should not be taken, as credit toward the major will not be given for this course.

2. From five (5) to seven (7) full quarter allied courses within the Division of Social Sciences are required. With the permission of the head of the department, a maximum of three commerce courses may be counted as allied courses, provided that the program of study warrants these courses as a part of a well-developed and integrated plan. Credit will not be granted for Commerce 51, and credit for Commerce 66 will be allowed only to transfer students from the School of Commerce who took the course prior to the time of transfer. In any case, the combined maximum number of courses in economics and commerce shall not exceed nine.

3. From five (5) to seven (7) full quarter non-divisional courses within the Divisions of Humanities and Natural Sciences are required.

4. A minimum total of eighteen (18) full quarter divisional and non-divisional courses in addition to those necessary for admission to the College of Arts and Sciences are required.

## ECONOMICS

### Courses for Undergraduates

31-32. GENERAL ECONOMICS (5 each quarter). Not open to freshmen. Sophomore elective.

The organization and underlying principles of modern enonomic life. The production, exchange, distribution, and consumption of wealth, and auxiliary economic problems.

*Every quarter.* Messrs. Spruill, Buchanan, Heath, Kottke, and other members of the staff.

41. RESOURCES AND INDUSTRIES (5). Prerequisites, Geography 38 or equivalent and Economics 31 and 32 or equivalent. Not open to economics majors.

A functional study of the availability of agricultural and industrial resources. The social and economic problems related to the appraisal and utilization of world resources.

*Every quarter.* Mr. Mouzon.

61. PRINCIPLES OF ECONOMICS (5). Not open to freshmen or sophomores.

For juniors and seniors not majoring in economics who desire a working knowledge of the American economic system and the structure and functioning of its characteristic institutions.

*Every quarter.* Mr. Heer.

81. MONEY AND BANKING (5). Prerequisite, Economics 31-32 or equivalent.
The functional operation of the American monetary system. The value of money, with particular reference to growing influences exerted by banks upon our credit structure.
*Every quarter.* Messrs. Bunting, Floyd, Woodward.

111. RESOURCES AND TECHNICS (5). Prerequisite, Economics 31-32 or equivalent.
The impact of technics upon international resources. The nature of resources, resources and production, basic international agricultural and industrial resources, and international resource interdependence.
*Winter quarter.* Mr. Mouzon.

124. PRINCIPLES OF MARKETING (5). Prerequisite, Economics 31-32 or equivalent.
Marketing organization and methods with emphasis on the social and economic aspects of distribution. Consumer problems, marketing functions and institutions, marketing methods and policies.
*Every quarter.* Messrs. McGregor, Blaine, Kirkpatrick, Stanback, Davis.

131. ECONOMIC THEORY (5). Prerequisite, Economics 31-32 or equivalent.
The analytical devices basic to the field of economics. The forces determining relative prices of products and of productive services. The role of competition in the planning of social-economic affairs.
*Winter quarter.* Messrs. Spruill, Philbrook.

135. ECONOMIC HISTORY (5). Prerequisite, Economics 31-32 or equivalent.
A study of economic developments in Europe and the United States. Emphasis is placed upon comparative economic conditions and developments and their relation to the political and cultural movements.
*Fall quarter.* Mr. Buchanan.

137. ECONOMIC DEVELOPMENTS IN THE ORIENT SINCE 1800 (5).
A study of traditional economic life and modern economic developments in Japan, China, and India. Special attention is given to modern commerce, finance, industry, and labor and their effect on indigenous cultures.
*Spring quarter.* Mr. Buchanan.

141. PUBLIC FINANCE (5). Prerequisite, Economics 31-32 or equivalent.
A general course covering the facts and theories of American public finance—federal, state, and local. Public expenditure, taxes and other forms of revenue, public borrowing, fiscal administration and policies.
*Every quarter.* Messrs. Heer, Lent, Ashby, Bunting.

142. PROBLEMS IN FEDERAL FINANCE (5). Prerequisite, Economics 141.
An advanced critical study of the problems of American national finance with particular reference to federal taxes and federal tax procedure.
*Winter quarter.* Mr. Heer.

143. PROBLEMS IN STATE AND LOCAL FINANCE (5). Prerequisite, Economics 141.
Selected problems relating to the financing of state and local functions.
*Spring quarter.* Mr. Heer.

145. THEORIES AND FORMS OF BUSINESS ENTERPRISE (5). Prerequisite, Economics 31-32 or equivalent.

The theories of business enterprise held by government officials and by business leaders. The development of institutions through which each group has sought to organize American business in conformity with its theories.

*Spring quarter.* Mr. Kottke.

151. TRANSPORTATION (5). Prerequisite, Economics 31-32 or equivalent.

The facilities and relative importance of the several types of transportation, state and federal regulations, rate-making practices, carrier relations, financing, and reorganizations.

*Fall and spring quarters.* Messrs. Heath, Blaine.

153. PUBLIC UTILITIES (5). Prerequisite, Economics 31-32 or equivalent.

The theory, techniques, and problems of government intervention in the establishment and operation of communications and power facilities, whether through regulation or public ownership.

*Winter quarter.* Mr. Kottke.

161. THEORY OF INTERNATIONAL TRADE (5). Prerequisite, Economics 31-32 or equivalent.

International economic relations. Problems involved in maintaining a world order and the role of free enterprise in their solution. The bases of trade, tariffs, exchange control, and trade policies.

*Spring quarter.* Mr. Philbrook.

170. ECONOMIC STATISTICS (6). Prerequisites, Mathematics 7, 8 or 9, Economics 31-32 or equivalent.

Sources and collection of data, tabular and graphic presentation, averages, dispersion, time-series analysis, correlation, index numbers, reliability of statistics and tests of significance.

*Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Messrs. Cowden, Durand, Pfouts, Hamrick, Truex.

171. SAMPLING AND STATISTICAL INFERENCE (5). Prerequisite, Economics 170.

Methods of sampling. Industrial quality control. Frequency distributions: normal; Pearsonian; Gram-Charlier; hyper-geometrical; binomial; Poisson. Curve fitting. Uses of F, t, and Chi-square. Estimation; confidence limits; tests of hypotheses. Analysis of variance.

*Five lecture hours and outside assignments each week, fall quarter. Laboratory fee, $3.00.* Mr. Cowden.

172. INDEX NUMBERS AND ANALYSIS OF ECONOMIC TIME SERIES (5). Prerequisite, Economics 170.

Index numbers construction: kinds of bias; tests of index numbers. Analysis of economic time series: non-linear trends; progressive seasonal; harmonic analysis; autoregression. Use of orthogonal polynomials. Forecasting.

*Five lecture hours and outside assignments each week, winter quarter. Laboratory fee, $3.00.* Mr. Cowden.

173. CORRELATION ANALYSIS (5). Prerequisite, Economics 170.

Fitting of regression equations. Multiple correlation, linear and non-linear. Partial correlation. Correlation concepts. Compact methods of computation. Tests of significance in correlation.

*Five lecture hours and outside assignments each week, spring quarter. Laboratory fee, $3.00.* Mr. Cowden.

182. MATHEMATICAL ECONOMICS (Mathematical Statistics 182) (5). Prerequisite, Mathematics 171 and corequisite Mathematics 147.

Perfect and imperfect competition. Monopoly. Utility vs. ranking of preferences. Relations between commodities. General equilibrium. Effects of taxes and controls of various kinds. Index numbers.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Hotelling.

185. BUSINESS CYCLES (5). Prerequisite, Economics 81 or equivalent.

Unemployment and its avoidance. A critical examination of theories of business fluctuations, and consideration of means of maintaining a high level of employment.

*Fall and spring quarters.* Mr. Philbrook.

191. AN INTRODUCTION TO THE LABOR PROBLEM (5). Prerequisite, Economics 31-32 or equivalent.

A survey of the field of labor with emphasis on the labor force, the structure of the labor market, collective bargaining, wages, hours, and the hazards of modern industrial life.

*Every quarter.* Messrs. Wolf, Guthrie.

192. LABOR AND SOCIAL CONTROL (5). Prerequisite, Economics 191.

This course deals with collective bargaining agencies, procedures, and the subject matter of collective bargaining. Cognizance is taken of the existing legal limitations on collective bargaining.

*Winter quarter.* Mr. Wolf.

193. HISTORY OF THE LABOR MOVEMENT (5). Prerequisite, Economics 191.

A history of the labor movement in the United States, with some references to its development in other industrial countries. The main objectives of the labor movement and its economic consequences are stressed.

(1951-1952 and alternate years.) *Spring quarter.* Mr. Guthrie.

194. SOCIAL INSURANCE (5). Prerequisite, Economics 191.

The origin and development of social insurance as a means of dealing with the hazards of modern industrial life. Special consideration of the development of social insurance systems in the United States.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Guthrie.

195. THEORIES OF ECONOMIC REFORM (5). Prerequisite, Economics 31-32 or equivalent.

A review of the basic institutions of the present economic order, followed by a critical examination of the leading proposals for reform, including Socialism, Communism, Totalitarianism, Single Tax, Consumer Cooperation, and Social Insurance.

*Winter and spring quarters.* Mr. Carroll.

197. GOVERNMENT AND BUSINESS (5). Prerequisite, Economics 31-32 or equivalent.

The regulation and control of business by government. Constitutional provisions, the antitrust laws, public utilities, taxation, labor laws, and transportation are the fields explored.

*Winter and spring quarters.* Messrs. Hobbs, Carter.

## Courses for Graduates

211. ADVANCED COMMODITY ECONOMICS (5). Prerequisite, Economics 111.

The supply and demand conditions of selected commodities representing certain types. The institutional factors affecting these conditions, with special reference to commodity control schemes.

*Spring quarter.* Mr. Mouzon.

224. THE ECONOMICS OF MARKETING (5). Prerequisite, Economics 124.

An evaluation of marketing structure and practices in terms of economic costs and social needs. Emphasis placed on the application of economic principles in the solution of marketing problems.

*Spring quarter.* Mr. McGregor.

235. ECONOMIC DEVELOPMENTS IN THE OCCIDENT BEFORE 1750 (5).

A survey of economic institutions in the ancient world, a study of medieval agriculture, the rise of cities, the Commercial Revolution, and the earlier stages of the Industrial Revolution.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Buchanan.

236. ECONOMIC DEVELOPMENTS IN THE OCCIDENT SINCE 1750 (5).

The evolution of modern economy in Europe and the United States. Emphasis on the Industrial Revolution and the changes which have accompanied it in agriculture, transportation, money and banking, trade, and the condition of laborers.

(1950-1951 and alternate years.) *Winter quarter.* Mr. Buchanan.

241. HISTORY OF FISCAL DOCTRINES (5). Prerequisite, Economics 141.

Theories of distributive justice and taxation; the incidence and economic effects of taxation; and the use of fiscal measures as instruments of social control.

*Spring quarter.* Mr. Heer.

244. INDUSTRIAL COMBINATIONS (5). Prerequisite, Economics 145 or permission of the instructor.

The nature and significance of the policies of the principal forms of industrial combinations in domestic and foreign trade. The alternative courses of government action with respect to such combinations.

*Fall quarter.* Mr. Kottke.

251-252-253. ADVANCED ECONOMIC THEORY (5 each quarter). Prerequisite, Economics 31-32 or equivalent.

The scope and analytical structure, the underlying philosophical postulates, and the relations to historical problems and policies of the leading types of economic theory. Economics 251 includes a survey of scope and method, but devotes primary attention to the Classical, Historical, and Socialist schools; Economics 252 covers the period of the earlier marginal utility economists and Marshall; and Economics 253, the developments in current theory since 1918.

*Fall, winter, and spring quarters.* Mr. Heath.

281. MONEY, PRICES, AND FOREIGN EXCHANGE (5). Prerequisite, Economics 81.

Monetary systems in the light of theory and historical development. Evaluation of contemporary policies and reform proposals. Analysis of interrelationships between monetary factors and economic processes and phenomena.

*Fall quarter.* Mr. Philbrook.

282. COMMERCIAL AND CENTRAL BANKING (5). Prerequisite, Economics 81.

The structure, functions, and operations of commercial and central banks with special reference to the Federal Reserve System. The policies of central banks as they relate to production, the national income, and the price level.

*Spring quarter.* Mr. Woosley.

291. LABOR ECONOMICS (5). Prerequisite, Economics 191.

The economic implications of basic phenomena in the field of labor, including the demand for and supply of labor, wage theory, unemployment, the economics of reduced working hours, collective bargaining, and social insurance.

*Spring quarter.* Mr. Wolf.

295. CASE STUDIES IN ECONOMIC REFORM (5). Prerequisite, Economics 195.

Selected case studies in current proposals for reform in the economic system. Individual assignments are made for critical study and reports.

*Spring quarter.* Mr. Carroll.

324. SEMINAR IN MARKETING (5).

A course providing selected graduate students the opportunity to make an intensive study of specific marketing problems.

**Fall or winter or spring quarter.* Messrs. McGregor, Logsdon.

NOTE: Registration for this course must be approved by the professor in charge.

341. RESEARCH COURSE IN PUBLIC FINANCE (5).

Open to qualified graduate students who wish to make intensive studies under the supervision of the instructor in charge of particular fields of public finance. Conference hours subject to arrangement.

**Fall or winter or spring quarter.* Messrs. Heer, Lent, Ashby.

NOTE: Registration for this course must be approved by the professor in charge.

351a.b.c. SEMINAR IN ECONOMICS (5 each quarter).

Designed to give the advanced graduate student an opportunity to deal critically with special problems or areas of theoretical analysis beyond the general scope of Economics 251-252-253.

**Fall or winter or spring quarter.* Messrs. Heath, Philbrook.

NOTE: Registration for this course must be approved by the professor in charge.

371. RESEARCH IN ECONOMIC STATISTICS (5).

**Winter or spring quarter.* Mr. Cowden.

NOTE: Registration for this course must be approved by the professor in charge.

382. SEMINAR IN PRIVATE FINANCE (5).

An advanced study of commercial banking, central banking policies, and the forces operating in the money and capital markets.

**Winter or spring quarter.* Messrs. Woosley, O'Neil.

NOTE: Registration for this course must be approved by the professor in charge.

385. ECONOMIC DYNAMICS (5).

The advanced study of business cycles. The modern controversy over employment and wages, interest, and money; anti-depression policy.

**Winter quarter.* Mr. Philbrook.

NOTE: Registration for this course must be approved by the professor in charge.

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*Equivalent of five hours a week.

391. HUMAN RELATIONS IN INDUSTRY (5).
This course offers mature students an opportunity to carry their investigations of significant subject matter beyond the limits of the formal course offerings.
**Fall or winter or spring quarter.* Messrs. Wolf, Guthrie.
NOTE: Registration for this course must be approved by the professor in charge.

399. SEMINAR (5).
Individual research in a special field under direction of a member of the department.

## COMMERCE

### Courses for Undergraduates

51. BUSINESS ORGANIZATION (5). Prerequisite, Economics 31 or equivalent.
The forms of business organization with emphasis on the corporation. Special attention is given to the functions of production, finance, personnel, marketing, risk-taking, and records and standards.
*Every quarter.* Messrs. Schwenning, Blaine, Durand, Stanback, Pierpont, Mitchell.

66. GENERAL PSYCHOLOGY FOR STUDENTS OF COMMERCE (5). For students in the School of Commerce; not open to others.
The basic principles of psychology which will enable the student to read and evaluate intelligently in any of the special fields. Much of the illustrative material relates to business problems.
*Every quarter.* Messrs. Bagby, Shepard.

71. ACCOUNTING PRINCIPLES I (6). Prerequisites or corequisites, Economics 31-32 or equivalent, Commerce 51.
An introduction to elementary accounting principles for single proprietorship, partnership, and corporation; covers the cycle of bookkeeping procedure: journalizing, posting, preparing a trial balance, adjustments, working papers, and closing the books.
*Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Messrs. Peacock, Sadler, Crutchfield, Stallings, Hartman, Barclay, Wade, Hanna, Reynolds, Pendergraph.

72. ACCOUNTING PRINCIPLES II (6). Prerequisite, Commerce 71.
Accounts for corporations and manufacturing companies are given special attention. The valuation of assets and liabilities and the analysis of financial statements.
*Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Messrs. Peacock, Sadler, Crutchfield, Stallings, Hartman, Barclay.

91-92. BUSINESS LAW (10). Prerequisite, Economics 31-32 or equivalent.
The main principles of law which govern in the daily conduct of business. The topics discussed include contracts, agencies, negotiable instruments, sales, bailments, corporations, partnerships, and bankruptcy.
*Every quarter.* Messrs. Hobbs, Carter, Barrett.

### Courses for Graduates and Advanced Undergraduates

120. GENERAL INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.
A survey of the fundamental principles of insurance and their application to life, property, casualty, and social insurance. Laws of probability, hazards, transfer and pooling of risks, contracts, rate-making, reserves, loss prevention, and state regulations.
*Fall quarter.* Mr. McGill.

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*Equivalent of five hours a week.

121. LIFE INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.
Detailed analysis of the basic principles and practices of life insurance. Includes functions of life insurance, types of policies and their purposes, calculations of premiums and reserves, sources of dividends, settlement options, non-forfeiture benefits, selection of risks, company organization, and important legal principles.
*Fall and winter quarters.* Mr. McGill.

122. PROPERTY INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.
A study of the important types of property coverages, including fire, marine, and inland marine insurance. Includes hazards, types of policies and endorsements, determination of rates, reinsurance, company organization, state regulations, and judicial decisions.
*Winter quarter.* Mr. McGill.

123. CASUALTY INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.
The social, economic, and legal bases for workmen's compensation, automobile, accident and health, burglary, fidelity, surety, and other casualty insurances. Includes rate-making, contract analysis, types of companies, and state regulation.
*Spring quarter.* Mr. McGill.

124. ADVANCED LIFE INSURANCE (5). Prerequisite, Commerce 121.
An analytical study of the more specialized life insurance services, such as administration of policy proceeds, the integration of life and property estates, business life insurance, and group coverages.
*Spring quarter.* Mr. McGill.

141. TRAFFIC PROBLEMS (5). Prerequisite, Economics 151.
A study of the problems related to the operation and management of traffic departments, the movement of freight traffic, services, shipping forms and regulations, charges and rate construction, and claims and claim prevention.
*Spring quarter.* Mr. Heath.

151. PRINCIPLES OF INDUSTRIAL MANAGEMENT (5). Prerequisites, Economics 31-32 or equivalent, Commerce 51.
A survey of the basic principles and control practices of modern scientific management, as applied in industry.
*Fall and winter quarters.* Mr. Dykstra.

154. PRODUCTION MANAGEMENT: THEORIES AND PRACTICES (5). Prerequisite, Commerce 151.
A case analysis course. Actual cases from industry are analyzed in the light of scientific management principles, and sound solutions are sought. Practice in writing problem-solution reports is an important part of the course.
*Winter quarter.* Mr. Dykstra.

155. PERSONNEL MANAGEMENT (5). Prerequisites, Economics 31-32, Commerce 51 or equivalent.
The methods of hiring and handling personnel; the supply, selection, training, promotion, transfer, and discharge of employees; the computation and significance of labor turnover; housing, educational, and recreational facilities.
*Every quarter.* Messrs. Schwenning, Calhoon, Whitehill.

156. PERSONNEL PROBLEMS (5). Prerequisite, Commerce 155.
Development of personnel projects and problem solutions on a professional scale. Analysis of personnel problems by use of case studies and demonstrations.
*Four lecture and two laboratory hours a week, every quarter. Laboratory fee, $3.00.* Mr. Calhoon.

157. TIME AND MOTION STUDY (6). Prerequisite, Commerce 151. Open to seniors and graduate students only.

The principles and techniques of modern motion and time study. This is principally a laboratory course in which students learn by doing.

*Four lecture and four laboratory hours a week, spring quarter. Laboratory fee, $6.00.* Mr. Dykstra.

158. PRODUCTION MANAGEMENT PROBLEMS (5). Prerequisite, Commerce 151.

This course deals with the solution of common industrial problems, such as determining economical manufacturing lot sizes and machinery replacement problems. The approach combines management principles with mathematical methods.

*Spring quarter.* Mr. Dykstra.

159. EMPLOYMENT AND TRAINING PROCEDURES (5). Prerequisite, Commerce 155.

An analysis of the methods of selecting and training employees, with primary emphasis on interviewing, evaluating, inducting, and counseling on the job.

*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Messrs. Schwenning, Calhoon.

161. ADVERTISING (5). Prerequisites, Economics 31-32, 124 or equivalent.

The organization and functions of advertising from the point of view of the business executive. Topics include economic and social aspects; types of advertising and purposes; media types, selection, and evaluation; advertising research.

*Every quarter.* Mr. Kirkpatrick.

163. ADVANCED COURSE IN MARKETING (5). Prerequisite, Economics 124.

A problem course dealing with specialized marketing functions and policies such as product and line, brands, channels of distribution, prices and pricing, sales promotion, and operating diagnosis and control.

*Every quarter.* Messrs. McGregor, Logsdon, Stanback, Davis.

165. RETAIL DISTRIBUTION (5). Prerequisites, Economics 124 and Commerce 163.

The general policies and operating practices of retail institutions. Store location, layout and merchandise classification, planning and stock control, store operations, and budgeting and cost control.

*Every quarter.* Mr. McGregor.

167. SALES MANAGEMENT (5). Prerequisites, Economics 124 and Commerce 163.

The planning, organization, and control of sales operations. Emphasis is placed upon the sales manager's functions and problems in manufacturing, wholesaling, and service establishments.

*Every quarter.* Mr. Logsdon.

168. SALES AND MARKET ANALYSIS (5). Prerequisites, Economics 170 and Commerce 163.

A study of procedures and problems in the analysis and evaluation of market areas, distribution channels, and marketing methods. Emphasis is placed on commercial research in the determination of sound marketing policies.

*Fall and spring quarters.* Mr. Logsdon.

171. ADVANCED ACCOUNTING I (5). Prerequisites, Commerce 71, 72.

A study of the complex and technical accounting problems involved in actuarial science, consignments, installment sales, branches, mergers, partnership installment liquidation, and insurance.

*Every quarter.* Messrs. Peacock, Crutchfield, Sadler, Stallings, Hartman.

172. ADVANCED ACCOUNTING II (5). Prerequisite, Commerce 171.

A study of accounting for combinations, consolidations, trustees, estates and corporate receiverships, liquidations, and reorganizations.

*Every quarter.* Messrs. Peacock, Crutchfield, Sadler, Stallings.

173. COST ACCOUNTING (6). Prerequisites, Commerce 71, 72.

A thorough study of cost systems, including job order, process and standard costs. Much attention is given to the control of costs through the use of material and labor forms.

*Four lecture and three laboratory hours a week, every quarter. Laboratory fee, $3.00.* Mr. Stallings.

175. AUDITING (6). Prerequisites, Commerce 71, 72.

A course in auditing theory and practice. The auditing procedures established by the American Institute of Accountants are covered and the duties of both the junior and senior accountants are studied.

*Four lecture and three laboratory hours a week, every quarter. Laboratory fee, $3.00.* Mr. Peacock.

177. INCOME TAX PROCEDURE (6). Prerequisites, Commerce 71, 72.

A study of the federal income tax laws and their application to practical tax situations. Lectures are supplemented by laboratory problems designed to afford training in the preparation of actual returns.

*Four lecture and three laboratory hours a week, every quarter. Laboratory fee, $3.00.* Mr. Crutchfield.

178. CERTIFIED PUBLIC ACCOUNTING PROBLEMS (6). Prerequisite, major in accounting.

A review of the general and specialized accounting problems which constitute the subject matter of C.P.A. examinations.

*Winter quarter.* Mr. Crutchfield.

179. GOVERNMENTAL ACCOUNTING (6). Prerequisite, Commerce 172.

Application and procedures for fund accounting in local governments, including counties, townships, cities, villages, school and special districts. Special consideration given to drafting of work sheet layouts.

*Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Mr. Sadler.

181. ADVANCED BANKING (5). Prerequisite, Economics 81.

A study of the organization and operation of banks; analyses of bank assets, liabilities, earnings, and expenses; the interrelations of business and banking policies.

*Winter quarter.* Mr. Woosley.

191. CORPORATION FINANCE (5). Prerequisites, Economics 31-32, Commerce 71.

A study of the principles and practice of corporate financing. The methods of raising permanent capital, problems of current financing, the treatment of earnings, and financial problems incident to expansion and reorganization.

*Every quarter.* Messrs. O'Neil, Lent, Whitehill, Floyd.

192. CORPORATE FINANCIAL PROBLEMS (5). Prerequisite, Commerce 191.

The development of policies by both large and small corporations to solve financial problems. Cases provide the basis for a critical evaluation of managerial decisions which create a defensible financial policy.

*Fall and winter quarters.* Mr. O'Neil.

195. INVESTMENTS (5). Prerequisite, Commerce 191.

A survey of investment principles and practices. Primary emphasis is placed on security analysis with the objective of developing techniques and standards of investment appraisal.

*Fall and spring quarters.* Messrs. Woosley, O'Neil.

## Courses for Graduates

207. THE FUNCTIONS AND THEORIES OF MANAGEMENT (5). Prerequisite, Commerce 51 or equivalent.

The function and theories of management in contemporary business. The management movement, scientific method in management, laws of organization, and types and theories of management organization.

*Winter quarter.* Mr. Schwenning.

255. WAGE ADMINISTRATION AND JOB EVALUATION (5). Prerequisite, Commerce 155.

The technical aspects of wage administration with emphasis on incentive plans, job evaluation systems, and problems encountered in wage and salary administration.

*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Calhoon.

273. ADVANCED COST ACCOUNTING (5). Prerequisite, Commerce 173.

Process cost accounting procedures, budgetary control and cost accounting, standard cost accounting and managerial analyses and reports.

*Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, $3.00.* Mr. Stallings.

274. ACCOUNTING SYSTEMS (5). Prerequisites, Commerce 172, 173.

The design and installation of accounting systems for textile and furniture manufacturing firms, banks, and public utilities.

*Five lecture and two laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Sadler.

399. SEMINAR (5 each quarter).

Individual research in a special field under direction of a member of the department.

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# SCHOOL OF EDUCATION

Professors: G. B. PHILLIPS, *W. CARSON RYAN, EDGAR W. KNIGHT, A. M. JORDAN, OLIVER K. CORNWELL, A. K. KING, W. E. ROSENSTENGEL, J. MINOR GWYNN, W. J. MCKEE, WILLIAM HOWARD PLEMMONS

Director of Physical Education and Athletics: R. A. FETZER

Associate Professors: WILLIAM HENRY PEACOCK, RICHARD ELMER JAMERSON, GEORGE EDWARD SHEPARD, WILLIAM DECATUR PERRY, DOROTHY MCCUSKEY, H. ARNOLD PERRY, RUTH WHITE FINK, G. GORDON ELLIS, CLYDE E. MULLIS, HENRY C. HOUSE

Assistant Professors: HARRY ARMOGIDA, SANDFORD S. DAVIS, SAMUEL M. HOLTON, E. M. ALLEN, W. W. RABB, CHARLES M. CLARKE, RUTH PRICE, FRANCES BURNS HOGAN

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*On leave for work with the State Department, Washington, D. C.

Instructors: CARL BLYTH, HAMMOND STRAYHORN, JAMES CAMP, JOSEPH HILTON, MARVIN BASS, BUNN HEARN, J. F. KENFIELD, P. H. QUINLAN, M. D. RANSOM, R. A. WHITE, M. Z. RONMAN, J. R. MURPHY, J. P. GILL, C. C. LITTLE, C. P. ERICKSON, G. J. RADMAN, L. RALPH CASEY, TOM SCOTT, MARY FRANCES KELLAM

Visiting Lecturer: JAMES S. TIPPETT

Teaching Fellow: CLINTON ROOSEVELT PREWETT

Graduate Assistants: J. R. MELTON, MARION C. RISER, JR., GEORGE W. HOLMES III, VIRGIL SCOTT WARD, FRANK NELSON, KATHERINE DURHAM, WILLIAM HUGHES DAVIS, JESSE K. GREENBAUM, WILLIAM L. JEFFORDS, MARY MCCORMIC, WILLIAM T. MEADE, SALLY SOUTHERLAND, HARRY ADAMS, ROBERT B. COX, WILLIAM A. FLAMISH, DONALD C. HARTIG, RICHARD D. MAXWELL, ROBERT M. MITTEN, SIDNEY VARNEY

## General Information

On June 1, 1948, the Department of Education was changed by the University Administration to a School of Education. The faculty of the new school was authorized to proceed with a reorganization of the program of teacher education under the direction of a dean.

A new bulletin has been prepared by the School of Education staff which may vary slightly from the plan which has been in operation during the transition period. The provisions and schedules contained in the new bulletin are correct and should be followed in cases where there is conflicting information between the two publications.

Students who plan to meet the requirements for a teaching certificate in Elementary Education or Secondary Education are under the joint direction of the School of Education and the respective subject matter departments.

Students interested in preparing to teach should consult the Dean of the School of Education, who will give information about the requirements in various teaching fields. Students are admitted to the School of Education for professional work at the beginning of the junior year. When the full provisions of the School of Education have been set up other announcements regarding admissions and requirements will be made.

The professional work in preparation for teaching must be taken over a two-year period. For that reason juniors should begin their work promptly in order to meet the requirements.

## Courses for Undergraduates

NOTE: For undergraduate courses in physical education see the Department of Physical Education.

41. INTRODUCTION TO THE STUDY OF EDUCATION I (5). Required of all prospective teachers, but open to others.
*Any quarter.* Messrs. Phillips, Holton, Armogida, Davis, Holmes.

42. INTRODUCTION TO THE STUDY OF EDUCATION II (5).
*Winter quarter.* Mr. Plemmons.

61. MATERIALS AND METHODS IN THE ELEMENTARY SCHOOL (5).
*Any quarter.*

62. DIRECTED TEACHING IN THE ELEMENTARY SCHOOL (5 or 10).
*Any quarter. Laboratory fee, $10.00 or $20.00.*

63. MATERIALS AND METHODS OF TEACHING HEALTH AND PHYSICAL EDUCATION (5).
This is a survey and evaluation of materials and methods in the teaching of health and physical education in the public schools.
*Five hours a week, fall quarter.*

64. DIRECTED TEACHING OF HEALTH AND PHYSICAL EDUCATION (5 or 10).
*Five hours a week, any quarter. Laboratory fee, $10.00 or $20.00.*

71. EDUCATIONAL PSYCHOLOGY (5). Required of all graduating from the Division of Teacher Education.
*Four lecture and two laboratory hours a week, any quarter. Laboratory fee, $1.00.* Messrs. Jordan, Davis, Ward.

73. STATISTICAL METHODS IN EDUCATION (3).
*Any quarter.* Staff.

75. MATERIALS AND METHODS IN HIGH SCHOOL INSTRUMENTAL MUSIC (5).
*Spring quarter.* Mr. Slocum.

76. MATERIALS AND METHODS IN HIGH SCHOOL CHORAL MUSIC (5 or 10).
*Winter quarter. Fee, $10.00 per 5 hours.* Mr. Carter.

78. DIRECTED TEACHING OF ART (5 or 10). Prerequisite, courses to be determined by the instructor.
*Any quarter, on application. Laboratory fee, $10.00 or $20.00.* Mr. Kachergis.

79. DIRECTED TEACHING OF HIGH SCHOOL CHORAL MUSIC (5 or 10).
*Five hours a week, any quarter, or the course may be spread out over two or three quarters. Laboratory fee, $10.00 per 5 hours.* Mr. Carter.

80. DIRECTED TEACHING OF HIGH SCHOOL INSTRUMENTAL MUSIC (5 or 10).
*Five hours a week, any quarter, or the course may be spread out over two or three quarters. Laboratory fee, $10.00 or $20.00.* Mr. Slocum.

81, 83a, 83b, 85, 87, 89, 91. MATERIALS AND METHODS IN HIGH SCHOOL ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE (5).
*Any quarter.* Messrs. Plemmons, Clarke, Giduz, Melton, Prewett, Riser, Miss McCuskey.

82, 84a, 84b, 86, 88, 90, 92. DIRECTED TEACHING: ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE (5 or 10).
*Any quarter. Laboratory fee, $10.00 or $20.00.* Messrs. Plemmons, Prewett, Clarke, Miss McCuskey.

95. BOOK SELECTION FOR YOUNG PEOPLE (5).
*Winter quarter.* Miss Kalp (of the School of Library Science).

96. SELECTION AND USE OF REFERENCE MATERIALS (5).
*Winter quarter.* Miss Kalp (of the School of Library Science).

97. BOOK SELECTION FOR CHILDREN (5).
*Spring quarter.* Miss Kalp (of the School of Library Science).

99. PRINCIPLES AND METHODS OF SECONDARY EDUCATION (5).
Required of all prospective high school teachers.
*Any quarter.* Messrs. Gwynn, Holton, Armogida, Melton.

## Courses for Graduates and Advanced Undergraduates

Undergraduate students who are not in the School of Education must get the permission of the dean to enroll in these courses.

NOTE: Most of the graduate courses in education are also available in one or both of the two terms of Summer Session. See the catalogue of the summer session.

Attention is called to courses listed under Psychology, Sociology, Physical Education, Dramatic Art, and other departments as of particular importance in present-day preparation of teachers and educational administrators. For advanced courses in physical education see the Department of Physical Education.

For graduate courses for teachers and school administrators offered on Saturdays at Chapel Hill see separate announcements available in advance of each quarter's work.

101ab. EDUCATIONAL ADMINISTRATION (5).
*Any quarter.* Messrs. Phillips, Rosenstengel.

102. ELEMENTARY SCHOOL ORGANIZATION AND ADMINISTRATION (3).
*Three hours a week, winter quarter.* Mr. Perry.

105ab. GUIDANCE IN THE SCHOOL (3 or 5).
*Three or five hours a week, fall or winter quarter.* Messrs. Perry, Ellis.

110. PHILOSOPHY OF MODERN EDUCATION (5).
*Fall quarter.* Messrs. Ryan, Plemmons.

111. ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL ARTS IN THE MODERN SCHOOL (3).
*Three hours a week, fall quarter.*

120. PRINCIPLES OF PHYSICAL EDUCATION (3). See Physical Education.

121. ADMINISTRATION OF PHYSICAL EDUCATION (5). See Physical Education.

130. PRINCIPLES AND METHODS IN ADULT EDUCATION (3).
*Three hours a week, alternate spring quarters.*

131. ADULT EDUCATION: A GENERAL SURVEY (3).
*Three hours a week, alternate spring quarters.*

135. AUDIO-VISUAL INSTRUCTION — TECHNIQUES AND MATERIALS (3).
*Three hours a week, fall and spring quarters.* Mr. Milner.

142. EUROPEAN FOUNDATIONS OF MODERN EDUCATION (5).
*Winter quarter.* Mr. Knight.

143. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES (History 170) (5).
*Fall quarter.* Mr. Knight.

144ab. COMMUNITY EDUCATION (3 or 5).
*Three or five hours a week, winter or spring quarter.* Messrs. Perry, Ryan, Tippett.

146. CONTEMPORARY ISSUES AND TRENDS IN EDUCATION (5).
*Spring quarter.* Mr. Knight.

147. HIGHER EDUCATION IN THE UNITED STATES (5). Prerequisite, Education 142 or Education 143, or equivalent.
*Alternate spring quarters.* Mr. Knight.

152ab. THE LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (3 or 5).
*Three or five hours a week, fall quarter.* Miss McCuskey, Mr. Tippett.

154. THE SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (3).
*Three hours a week, alternate spring quarters.* Messrs. Perry, King.

155. NATURAL SCIENCE IN THE ELEMENTARY SCHOOL (3).
*Three hours a week, alternate spring quarters.* Mr. Tippett.

156. ARITHMETIC IN THE ELEMENTARY SCHOOL (3).
*Three hours a week, winter quarter.*

160ab. CURRICULUM CONSTRUCTION (3 or 5).
Open to seniors and graduate students with 25 quarter hours of credit in Education.
*Three or five hours a week, fall or winter quarter.* Messrs. Gwynn, Tippett, Miss McCuskey.

161. PROGRESSIVE PRACTICES IN THE MODERN SCHOOL (3).
*Three hours a week, winter or spring quarter.* Messrs. McKee, Tippett, Miss McCuskey.

171ab. GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD (3 or 5).
a. Child Development (3); b. Adolescence (3).
*Three or five hours a week, spring quarter.* Mr. Jordan.

172. THE PROBLEMS OF MALADJUSTMENT AMONG CHILDREN (3).
*Three hours a week, winter quarter.* Messrs. Jordan, Perry.

174ab. USE AND INTERPRETATION OF EDUCATIONAL TESTS AND MEASUREMENTS (3 or 5).
*Three or five hours a week, fall quarter.* Mr. Jordan.

175. EXTRACURRICULAR ACTIVITIES (5).
*Spring quarter.* Mr. Plemmons.

176. MENTAL HYGIENE IN TEACHING (5). Prerequisite, introductory courses in psychology and education.
*Winter or spring quarter.* Mr. Ryan.

177abc. SURVEY IN SPECIAL EDUCATION (3 or 9).
(Not offered in 1949-1950.) *Three or five hours a week, fall and spring quarters.*

178ab. THEORY AND PRACTICE IN EDUCATING THE SPEECH HANDICAPPED (3 or 5).
(Not offered in 1949-1950.) *Three or five hours a week, winter quarter.*

196. THE JUNIOR HIGH SCHOOL (3).
*Three hours a week, spring quarter.* Messrs. Gwynn, Plemmons.

197. SOCIAL POLICY AND EDUCATION (3).
*Three hours a week, alternate winter quarters.* Mr. King.

199. SECONDARY EDUCATION IN THE UNITED STATES (5).
*Alternate winter quarters.* Messrs. King, Plemmons.

201. PROCEDURES IN EDUCATIONAL RESEARCH (3).
*Three hours a week, any quarter.* Messrs. King, McKee.

203. STATISTICAL METHODS IN EDUCATION (5). Prerequisite, Education 71.
*Five hours a week, fall and winter quarters.* Messrs. Jordan, Rosenstengel, Cornwell.

204. TECHNIQUES IN EDUCATIONAL LEADERSHIP (3).
*Three hours a week, spring quarter.* Messrs. Phillips, Rosenstengel.

205. TECHNIQUES IN COUNSELING (3). Prerequisites, appropriate psychology courses and Education 105.
*Three hours a week, winter quarter.* Messrs. Perry, Ellis.

206. GENERAL PRINCIPLES OF OCCUPATIONAL DIAGNOSIS AND GUIDANCE (5). Prerequisites, practical experience and at least two years of Education and Psychology.
*Five hours a week, fall quarter.* Mr. Perry.

207. STUDENT PERSONNEL ADMINISTRATION (3). Prerequisites, appropriate psychology courses and Education 205.
*Three hours a week, spring quarter.* Messrs. Perry, Ellis.

208ab. STATE AND COUNTY SCHOOL ORGANIZATION (5). Prerequisite, Education 101 or its equivalent.
*Alternate winter quarters.* Mr. Rosenstengel.

209ab. BUSINESS MANAGEMENT AND SCHOOL FINANCE (3 or 5). Prerequisite, Education 101 or its equivalent.
*Three or five hours a week, alternate winter quarters.* Messrs. Phillips, Rosenstengel.

210ab. MANAGEMENT OF SCHOOL PLANT AND EQUIPMENT (5). Prerequisite, Education 101 or its equivalent.
*Five hours a week, fall quarter.* Mr. Rosenstengel.

224. (See under Physical Education).

225. (See under Physical Education).

245. COMPARATIVE EDUCATION (5).
*Five hours a week, spring quarter.* Mr. Knight.

265. INVESTIGATIONS IN READING (3).
*Three hours a week, alternate fall quarters.* Mr. Tippett.

267ab. EDUCATION WORKSHOP (5 to 10).
Open by special permission to a limited number of qualified graduate students who have specific interests or problems that are adapted to staff and local resources available.
Graduate staff, and visiting faculty.

271ab. PROBLEMS IN EDUCATIONAL PSYCHOLOGY I (5).
a. Individual Differences (3).
b. Problems of Conduct (3).
*Five hours a week, fall quarter.* Mr. Jordan.

272ab. PROBLEMS IN EDUCATIONAL PSYCHOLOGY II (5). Prerequisite, one and preferably two courses in educational and developmental psychology.
a. Psychology of Learning (Theoretical Aspects) (3).
b. Psychology of Learning (Practical Applications) (3).
*Five hours a week, winter quarter.* Mr. Jordan.

273. MENTAL MEASUREMENTS (5). Prerequisite, one course in educational psychology or a course in general psychology.
*Five hours a week, spring quarter.* Messrs. Jordan, Ellis.

277ab. ADVANCED THEORY AND PRACTICE IN EDUCATING THE SPEECH HANDICAPPED (5).
a. Organic (3).
b. Functional (3).
(Not offered in 1949-1950.) *Five hours a week, winter or spring quarter.*

285. INVESTIGATIONS AND TRENDS IN TEACHING THE SOCIAL STUDIES (3).
*Three hours a week, alternate winter quarters.* Mr. King.

296ab. ORGANIZATION AND ADMINISTRATION OF SECONDARY SCHOOLS (3 or 5).
*Three or five hours a week, winter quarter.* Messrs. Gwynn, Plemmons.

298ab. SUPERVISION OF INSTRUCTION (3 or 5).
*Three or five hours a week, fall and winter quarters.* Messrs. Perry, Gwynn, Phillips.

303ab. PROBLEMS IN EDUCATIONAL ADMINISTRATION (3 or 5). Prerequisites, Education 101 or its equivalent and one other course in educational administration.
*Three hours a week, any quarter.* Messrs. Phillips, Rosenstengel, Plemmons.

304ab. PROBLEMS IN EDUCATIONAL MEASUREMENT (3). Prerequisite, Education 174.
*Three hours a week, any quarter.* Mr. Jordan.

341ab. FOUNDATIONS OF MODERN EDUCATION (3 to 5). Prerequisites, Education 142 and 143, or equivalent.
*Three hours a week, fall, winter, and spring quarters.* Mr. Knight.

350ab. PROBLEMS IN ELEMENTARY EDUCATION (3 to 5). Prerequisites, two courses in undergraduate education.
*Three hours a week, any quarter.* Mr. Perry, Miss McCuskey.

360ab. PROBLEMS IN THE CURRICULUM (3 to 5). Prerequisites, two courses in graduate education.
*Three hours a week, any quarter.* Mr. Gwynn, Miss McCuskey.

375. THESIS COURSE (Maximum with thesis 5).
*Any quarter.* Members of the graduate faculty.

376ab. SEMINAR IN EDUCATION (3 to 5). Prerequisites, two courses in graduate education.
*Three or five hours a week, any quarter.* Members of the graduate faculty.

398ab. PROBLEMS IN SECONDARY EDUCATION (3 to 5). Prerequisites, two courses in graduate secondary education.
*Three hours a week, every quarter.* Messrs. Gwynn, Plemmons.

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## DEPARTMENT OF ENGLISH

Professors: C. P. LYONS, G. C. TAYLOR, G. R. COFFMAN, *G. L. PAINE, A. P. HUDSON, A. C. HOWELL, DOUGALD MACMILLAN, R. P. BOND, RAYMOND ADAMS, W. A. OLSEN, H. K. RUSSELL, SAMUEL SELDEN, WILLIAM WELLS, R. B. SHARPE, N. E. ELIASON, EARL WYNN, E. W. TALBERT, †FLOYD STOVALL

Associate Professors: J. O. BAILEY, E. H. HARTSELL, G. F. HORNER, N. W. MATTIS, L. A. COTTEN

Assistant Professors: CHARLES EATON, MACON CHEEK, C. H. HOLMAN, J. M. STEADMAN III

Instructors: LILLIE H. ANTONAKOS, KATHERINE CARMICHAEL, ROBERTA M. HAMILTON, DOROTHY MCCULLOUGH, MARY FRANCES MINTON, JESSIE REHDER, F. L. ALBERT, J. A. ALLEN, F. W. ANDERSON, A. R. BARKER, J. L. BRODERICK, E. A. BROWN, H. S. BRUTON, JOAN M. CRONIN, F. B. DEDMOND, A. C. DOBBINS, L. E. DOLLARHIDE, J. R. GASKIN, R. L. GEEHERN, J. E. GINTHER, T. Y. GREET, G. M. HARPER, P. H. HIGHFILL, J. R. HODGES, K. H. HUNTER, ANNIBEL JENKINS, R. E. KASKE, JEAN LATHIM, W. L. MACILWINEN, J. R. MCQUISTON, F. H. MOORE, FRANCES PEDIGO, H. B. ROLLINS, E. A. STEPHENSON, JACK SUBERMAN, W. O. S. SUTHERLAND, J. L. TISON, G. W. WALKER

Teaching Fellows: R. E. AYCOCK, L. H. POTTER, R. P. ROGERS

Graduate Assistants: VIRGINIA T. HERRIN, VIRGIE MATSON

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*Deceased, February 17, 1950.
†Beginning January 1, 1950.

## Courses for Undergraduates

*Prerequisites:* English 1, 2, and 3 are prerequisite to all advanced courses offered by the English department. Juniors will not be admitted to courses for advanced undergraduates except by permission.

*Majors in English:* A student choosing English as his major field should take (a) English 50; (b) one of the following: English 91, 93, 94, 95, 163; (c) one of the following: English 70, 112, 125; (d) one of the following: English 79, 81, 82, 83 or 131, 84 or 141, 88, 89, 111, 121, 151; (e) four courses chosen as free electives from the advanced courses offered by the department (courses numbered from 40 to 199, with the exception of 51 and 59). In accordance with University regulations a student must have a grade of C or better in at least thirty quarter hours in the major.

*Majors in English in the School of Education:* Students aiming at a certificate to teach in the public high schools, with a major in English, should consult the School of Education for the courses in education and for the minor. The English requirements are: (a) English 81; (b) English 50; (c) one of the following: English 70, 95, 96; (d) one of the following: English 88, 84 or 141, or by permission, 83 or 131; (e) one of the following: English 44, 52, 53, 54, 55, 56, 95, 96; (f) two electives. A student may not take both 95 and 96 to satisfy requirements (c) and (e). In accordance with University regulations a student must have a grade of C or better in at least thirty quarter hours in the major.

*Minors in English in the School of Education:* Students who choose a minor program in English will take: (a) English 81; (b) English 50; (c) one of the following: English 88, 84 or 141, or by permission one of the following: English 70, 83 or 131, 99, 125; (d) one of the following: English 52, 53, 54, 96, or by permission an elective.

*Honors in English:* Students interested in reading for honors in English should consult the regulations governing the honors program in the Division of the Humanities.

1. FRESHMAN ENGLISH: GRAMMAR AND COMPOSITION (5).
Required of all freshmen except those qualifying for English 2.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and the freshman staff.

2. FRESHMAN ENGLISH: COMPOSITION AND RHETORIC (5).
Required of all freshmen who have passed English 1 or been exempted from it.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and the freshman staff.

3. ENGLISH LITERATURE (5). Prerequisite, English 2.

Substantial readings in Chaucer, Shakespeare, and Milton. Required of all sophomores.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and staff.

4. ENGLISH LITERATURE (5). Prerequisites, English 2 and 3.
Substantial readings in major writers of the nineteenth century. Sophomore option.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and staff.

5. ENGLISH AND AMERICAN FICTION (5). Prerequisites, English 2 and 3.
Readings in the novel (Hawthorne, Hardy, Twain, Maugham, Lewis) and in selected contemporary short stories. Sophomore option.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and staff.

6. AMERICAN LITERATURE (5). Prerequisites, English 2 and 3.
Substantial readings in Poe, Hawthorne, Whitman, Twain, Frost, and Hemingway. Sophomore option. This course will not satisfy the American literature requirements for the teacher's certificate.
*Fall, winter, or spring quarter.* Mr. Horner, *Chairman,* and staff.

40. VOICE TRAINING (5).
*Fall, winter, or spring quarter. Laboratory fee, $1.50.* Mr. Mattis.

41. THE ORAL INTERPRETATION OF LITERATURE (5).
*Fall or spring quarter. Laboratory fee, $1.50.* Mr. Mattis.

44. PUBLIC SPEAKING (5).
Composition and delivery of original speeches.
*Fall, winter, or spring quarter. Laboratory fee, $1.50.* Messrs. Olsen, Mattis.

50. SHAKESPEARE (5).
Study of about twenty representative comedies, histories, and tragedies.
*Fall quarter,* Mr. Lyons; *winter quarter,* Mr. Talbert; *spring quarter,* Mr. Lyons.

51. ADVANCED COMPOSITION: PRACTICAL EXPOSITION (5).
Primarily for Commerce and Pharmacy students. Business forms, letters, reports, professional papers, and articles for the press.
*Fall quarter,* Mr. Holman; *winter and spring quarters,* Mr. Steadman.

52. ADVANCED COMPOSITION: THE TECHNIQUE OF EXPOSITION (5).
Expository writing for students desiring practice in the organization of material.
*Permission of the instructor is required for registration. Winter quarter,* Mr. Cheek; *spring quarter,* Mr. Bailey.

53. CREATIVE WRITING I: INTRODUCTION TO THE SHORT STORY (5).
Class discussion of classic short stories and general literary principles; technical training in the writing of original short stories.
*Permission of the instructor is required for registration. Fall and spring quarters.* Mr. Eaton.

54. CREATIVE WRITING II (5).
An advanced course in imaginative writing for students who have had some previous experience in this field.
*Permission of the instructor is required for registration. Winter quarter.* Mr. Eaton.

55. ADVANCED VOICE TRAINING (5). Prerequisite, English 40 or permission of the instructor.
*Winter quarter. Laboratory fee, $1.50.* Mr. Mattis.

56. ADVANCED PUBLIC SPEAKING (5). Prerequisite, English 44 or permission of the instructor.

Composition and delivery of original speeches. Political speeches and analysis of propaganda techniques. Elementary semantics.

*Winter quarter. Laboratory fee, $1.50.* Mr. Olsen.

59. SCIENTIFIC WRITING (5).

To meet the needs of students in the sciences, through practice in writing explanations, descriptions, business letters, professional papers, and reports.

*Permission of the instructor is required for registration. Winter quarter,* Mr. Howell; *spring quarter,* Mr. Holman.

70. CHAUCER (5).

The poet as literary artist in *The Canterbury Tales* and other selected works.

*Fall quarter.* Mr. Coffman or Mr. Lyons.

72-73. COURSE FOR HONORS (10). See the Program for Honors Work in the Division of the Humanities.

Readings and the preparation of an essay under the direction of departmental advisers.

79. ENGLISH LITERATURE, 1890-1920 (5).

Hardy, Henley, Housman, Kipling, Wilde, Shaw, Conrad, Galsworthy, and the Irish Revival.

*Spring quarter.* Mr. Cotten.

81. AMERICAN LITERATURE (5).

A survey, 1830 to 1855, with especial attention to Poe, Emerson, Thoreau, Lowell, Hawthorne, and Melville.

*Fall quarter,* Mr. Adams; *winter quarter,* Mr. Holman; *spring quarter,* Mr. Horner.

82. AMERICAN LITERATURE (5).

A survey from Whitman to the present, with emphasis on the literature of the South, the local-color movement, the rise of realism, and the social novel after 1880.

*Winter quarter,* Mr. Stovall; *spring quarter,* Mr. Adams.

83. PROSE AND POETRY OF THE CLASSICAL PERIOD (5).

Addison, Steele, Swift, Pope, Johnson, Boswell, Gray, Cowper.

*Winter quarter.* Mr. Bond.

84. THE CHIEF ROMANTIC POETS (5).

Wordsworth, Coleridge, Byron, Shelley, and Keats.

*Fall quarter.* Mr. Hudson.

87. THE LITERARY ASPECTS OF THE BIBLE (5).

The Old Testament and the New Testament will be taken up in alternate years.

*Spring quarter.* Mr. Howell.

88. VICTORIAN LITERATURE I, 1832-1860 (5).

Carlyle, Tennyson, Browning, Dickens, Thackeray, and Charlotte Brontë.

*Fall quarter.* Mr. Bailey.

89. VICTORIAN LITERATURE II, 1860-1890 (5).

Ruskin, Arnold, Rossetti, Morris, Swinburne, George Eliot, and Meredith.

*Winter quarter.* Mr. Cotten.

91. THE ENGLISH NOVEL (5).
The English novel from Defoe to Hardy.
*Winter quarter,* Mr. Russell; *spring quarter,* Mr. Cheek.

93. THE ENGLISH DRAMA (5).
The English drama from the beginnings to 1900.
*Fall quarter.* Mr. MacMillan or Mr. Wells.

94. PRINCIPLES OF LITERARY ART (5).
A study of the theories of literature through their application to specific English masterpieces.
*Spring quarter.* Mr. Bond or Mr. Lyons.

95. THE ENGLISH LANGUAGE (5).
English of the present day, standard and dialectal, its historical background and development, British and American.
*Spring quarter.* Mr. Eliason.

96. ENGLISH GRAMMAR (5).
A study of modern English grammar especially for prospective teachers; bases of grammatical rules, prescriptive *vs.* descriptive grammar, relationship of grammar and composition.
*Fall quarter.* Mr. Eliason.

97. RECENT BRITISH AND AMERICAN PROSE (5).
A study of prose writings, chiefly fiction, since 1920.
*Fall quarter.* Mr. Russell or Mr. Bailey.

98. RECENT BRITISH AND AMERICAN POETRY (5).
A study of the poetry written in English since 1920.
*Winter quarter.* Mr. Cotten.

## Courses for Graduates and Advanced Undergraduates

NOTE: Except by permission juniors will not be admitted to these courses.

101. OLD ENGLISH GRAMMAR AND READINGS (5).
Primarily a linguistic course, the study of Old English grammar, but includes some translation of prose and poetry.
*Fall quarter.* Mr. Eliason.

105. MEDIEVAL ROMANCE IN ENGLISH (5).
A survey of romance materials in English literature, with particular attention to the Arthurian tradition.
(Not offered in 1949-1950.) Mr. Coffman.

111. ENGLISH LITERATURE OF THE RENAISSANCE (5).
A survey of the literature of the Elizabethan period, exclusive of the drama.
*Winter quarter.* Mr. Wells.

112. SPENSER (5).
The works of Spenser studied in the light of the life, times, and culture of the poet.
*Spring quarter.* Mr. Wells.

113. ENGLISH DRAMA TO 1600 (5).
English drama in the sixteenth century, with preliminary consideration of the medieval religious drama.
*Fall quarter.* Mr. Coffman.

114. ENGLISH DRAMA, 1600-1642 (5).
Jacobean and Caroline drama, with emphasis on Jonson, Chapman, Webster, Beaumont, Fletcher, Massinger, and Ford.
*Winter quarter.* Mr. Sharpe.

121. ENGLISH LITERATURE, 1616-1700 (5).
The non-dramatic literature of the period.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Howell.

125. MILTON (5).
The works of Milton studied in the light of the life, times, and culture of the poet.
*Winter quarter.* Mr. Howell.

131. ENGLISH LITERATURE, 1700-1780 (5).
The non-dramatic literature of the period.
*Fall quarter.* Mr. Bond or Mr. MacMillan.

133. RESTORATION AND EIGHTEENTH-CENTURY DRAMA (5).
A study of the drama from 1660 to 1780.
*Winter quarter.* Mr. MacMillan.

148. NINETEENTH-CENTURY DRAMA, ENGLISH AND AMERICAN (5).
A survey of dramatic movements and writers from 1800 to 1900.
*Fall quarter.* Mr. Bailey.

151. EARLY AMERICAN LITERATURE (5).
A survey of the colonial, revolutionary, and early national periods, including Bryant, Irving, and Cooper.
*Fall quarter.* Mr. Horner.

153. SOUTHERN AMERICAN LITERATURE (5).
The three centuries from John Smith to Ellen Glasgow, treating major trends and authors.
(Not offered in 1949-1950.) Mr. Stovall.

163. LITERARY CRITICISM (5).
The principles which have animated classical, romantic, and realistic literature.
*Fall quarter.* Mr. Bond or Mr. Lyons.

164. BRITISH AND AMERICAN DRAMA OF THE TWENTIETH CENTURY (Dramatic Art 164) (5).
A survey of dramatic movements and writers from 1900 to the present.
*Spring quarter.* Mr. Sharpe.

167. THE ENGLISH BALLAD (5).
English and Scottish popular ballads and their survivals in America, particularly in North Carolina.
*Spring quarter.* Mr. Hudson.

## Courses for Graduates

201. STUDIES IN OLD ENGLISH LITERATURE: BEOWULF (5). Prerequisite, English 101.
Primarily a literary course; the whole body of Old English literature surveyed, but Beowulf given major attention.
*Winter quarter.* Mr. Eliason.

202. MIDDLE ENGLISH (5).
The literature of the period in relation to its social, political, and religious background.
*Spring quarter.* Mr. Coffman.

204. HISTORY OF THE ENGLISH LANGUAGE (5). Prerequisite, English 101 or the permission of the instructor.
For students of linguistics and others wishing a thorough background for literary studies; an intensive study of the language according to historical methods.
*Spring quarter.* Mr. Eliason.

208. CHAUCER (5).
A reading of Chaucer's works with attention to critical, historical, and linguistic problems involved in their interpretation.
*Winter quarter.* Mr. Coffman or Mr. Lyons.

225. MILTON (5).
An intensive study of Milton's works and thoughts.
*Spring quarter.* Mr. Talbert.

231. SHAKESPEARE: THE COMEDIES (5).
Emphasis on historical and critical problems presented by Shakespeare's works.
*Fall quarter.* Mr. Talbert or Mr. Lyons.

232. SHAKESPEARE: THE TRAGEDIES (5).
Emphasis on historical and critical problems presented by Shakespeare's works.
*Winter quarter.* Mr. Talbert or Mr. Lyons.

241. ENGLISH LITERATURE 1780-1839 (5).
A survey of the Romantic period, with especial attention to the greater poets.
*Winter quarter.* Mr. Hudson.

243. VICTORIAN LITERATURE: POETRY (5).
The major Victorian poets with emphasis on Tennyson and Browning.
*Fall quarter.* Mr. Cotten.

244. VICTORIAN LITERATURE: PROSE (5).
Primarily Ruskin, Morris, Eliot, Arnold, Hardy.
*Winter quarter.* Mr. Bailey.

283. AMERICAN LITERATURE, 1830-1855 (5).
English 151 precedes this survey, but is not prerequisite. Poe, Emerson, Thoreau, Longfellow, Lowell, and Hawthorne.
*Winter quarter.* Mr. Adams or Mr. Stovall.

284. AMERICAN LITERATURE, 1855-1900 (5).
Chief authors: Melville, Whitman, Mark Twain, Bret Harte, Howells, and James. Realism, literary criticism, and the dominance of magazines.
*Spring quarter.* Mr. Stovall or Mr. Adams.

307. SEMINAR: STUDIES IN MEDIEVAL LITERATURE (5).
Research in special problems in the vernacular literature of the Middle Ages.
*Winter quarter.* Mr. Coffman.

310. I: SEMINAR: STUDIES IN ELIZABETHAN LITERATURE (5).
*Fall quarter.* Messrs. Lyons, Talbert.

310. II: SEMINAR: STUDIES IN ELIZABETHAN LITERATURE (5).
*Spring quarter.* Messrs. Lyons, Talbert.

312. SEMINAR: STUDIES IN SEVENTEENTH-CENTURY LITERATURE (5).
*Winter quarter.* Mr. Howell.

313. SEMINAR: STUDIES IN EIGHTEENTH-CENTURY LITERATURE (5).
Special problems in the literary and intellectual movements of the century.
*Spring quarter.* Mr. MacMillan or Mr. Bond.

317. SEMINAR: STUDIES IN NINETEENTH-CENTURY ROMANTICISM IN ENGLAND (5).
Two divisions in alternate years: Byron and Shelley problems; Wordsworth and Coleridge problems.
*Spring quarter.* Mr. Hudson.

318. SEMINAR: STUDIES IN AMERICAN LITERATURE (5).
*Winter quarter.* Mr. Adams or Mr. Stovall.

320. SEMINAR: STUDIES IN VICTORIAN LITERATURE (5).
The study of a Victorian writer selected by the seminar.
*By special arrangement.*

325. SEMINAR: MODERN DRAMA (Dramatic Art 325) (5).
*Fall quarter.* Messrs. Sharpe, Selden.

331. BIBLIOGRAPHY AND METHODOLOGY (5). Required of all candidates for the A.M. and Ph.D. degrees.
A course designed to aid students in preparing term papers, theses, and dissertations. Attention to bibliographical guides, problems of literary research, and standard scholarly forms and procedures.
*Fall quarter,* Mr. Bond; *spring quarter,* Mr. MacMillan.

340. SPECIAL READINGS (5).

341. SPECIAL RESEARCH (5).
Investigation in a special field, usually in the course of writing a thesis or dissertation, under the direction of a member of the department.
Attention is called to the courses in philology and advanced literary study offered in the Departments of Classics (Latin Epigraphy, Latin Paleography), Comparative Literature, Germanic Languages (Gothic, Old and Middle High German, Old Saxon, Old Norse, etc.), and Romance Languages (Old French, Provençal, Old Irish, Old Spanish, Dante, etc.).
See also the Curriculum in Comparative Linguistics.

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## CURRICULUM IN FOLKLORE

Dean W. W. PIERSON, *Chairman*
Professors: R. S. BOGGS, *Secretary*, J. P. GILLIN, U. T. HOLMES, A. P. HUDSON, RICHARD JENTE, G. B. JOHNSON, J. P. SCHINHAN

This curriculum assembles the facilities of the University for those who desire a major or minor for the master's degree or a doctoral minor in folklore with a major in some related department and mobilizes the pertinent graduate instruction in this field now being offered in such departments as English, Germanic Languages, Music,

Romance Languages, and Sociology and Anthropology. Students having had an undergraduate major in any one of these departments, and having had the prerequisite courses, are eligible to take work in this curriculum with a view to becoming candidates for higher degrees.

## Courses for Graduates and Advanced Undergraduates

104. FOLK MUSIC (Music 104) (3).
A comparative study of the folk songs of various nations, with special emphasis on the American folk music of the South. Lectures, readings, and the study of music available in print or on phonograph records.
*To be arranged.* Mr. Schinhan.

105. CELTIC: OLD IRISH (French 105) (5).
*Winter quarter.* Mr. Holmes.

106. CELTIC: OLD WELSH (French 106) (5).
*One quarter.* Mr. Holmes.

122. CULTURAL ANTHROPOLOGY (Anthropology 122) (5).
*Winter quarter.* Messrs. Gillin, Johnson.

127. NATIVE PEOPLES AND CULTURES OF LATIN AMERICA (Anthropology 127) (5).
Prerequisites, ability to read Spanish and/or Portuguese, undergraduate work in one or more social sciences, and Folklore 185.
(1950-1951 and alternate years.) *Winter quarter.* Mr. Gillin.

128. FOLK CULTURES IN THE MODERN WORLD (Anthropology 128) (5). Prerequisite, Folklore 185.
The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.
(1949-1950 and alternate years.) *Fall quarter. Materials fee, $1.00.* Mr. Gillin.

167. THE ENGLISH BALLAD (5). Prerequisite, Folklore 185.
English and Scottish popular ballads and their survivals in America, particularly in North Carolina.
*Spring quarter.* Mr. Hudson.

185. INTRODUCTION TO FOLKLORE (Comparative Literature 185) (5).
Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.
*Fall quarter* Mr. Boggs.

## Courses for Graduates

203. PROVERBIAL SPEECH (5). Prerequisite, Folklore 185.
Study of origin, development, use, and dissemination of proverbs, maxims, Wellerisms, and proverbial phrases, their importance in life and literature, with emphasis on folk wit and humor.
*Spring quarter.* Mr. Jente.

*204-205. INTRODUCTION TO COMPARATIVE MUSICOLOGY (Music 204-205) (6).

Prerequisite, a reading knowledge of one or more foreign languages, preferably German, Spanish, or French, a working knowledge of the theory and history of music, and permission of the instructor.

*Three hours a week, fall and winter quarters.* Mr. Schinhan.

210. FOLK SOCIOLOGY (Sociology 210) (5). Prerequisite, Folklore 185.

*Spring quarter.* Mr. Odum.

230. RACE AND CULTURE CONTACTS (Anthropology 230) (5). Prerequisite, Folklore 185.

This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

314. FOLK NARRATIVE (5). Prerequisite, Folklore 185.

Study of origin, development, and dissemination of myths, legends, and folktales, with a survey of their use in masterpieces of world literature.

*Winter quarter.* Mr. Boggs.

395. RESEARCH (5).

Research in a special field under the direction of members of the staff.

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## FRENCH

**(See Romance Languages)**

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## DEPARTMENT OF GEOLOGY AND GEOGRAPHY

Professors: GERALD RALEIGH MACCARTHY, SAMUEL THOMAS EMORY
Visiting Professor: WILLIAM JOHN MILLER
Associate Professors: WILLIAM A. WHITE, J. SULLIVAN GIBSON
Visiting Associate Professor: RAOUL CEVARRE MITCHELL
Assistant Professors: ROY LEE INGRAM, DAVID GIOVANNI BASILE
Part-time Instructors: EDWARD CLARK BERRY, FRANK OTTO BOWMAN, JR., KING WILLIAM BRETT, THOMAS COWAN MCILHENNY, WILLIAM FREDERICK MARKGRAF, ROBERT GAIGE VAN NOSTRAND, BENJAMIN EVANS WARNER
Teaching Fellow: JAMES EDWARD BAGWELL
Graduate Assistants: CHESTER OSCAR ENSIGN, JR., PETER HARRY GERNS, JAMES EDWARD MALONEY, HARRY MILES PEEK, MAURICE CARY POWERS, JOHN HERMAN RECKNAGEL, JR., ERNEST MARSHALL SMITH, JR.
Assistant: JAMES EDWARD PAYNE

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*Will be given as the demand warrants.

## GEOLOGY

For A.B. with major in geology there are required, beyond Introduction to Physical and Historical Geology, the following courses: Six courses in geology; at least five and not more than seven courses in allied sciences, including introductory course in chemistry or physics, which may be taken in the General College; and sufficient courses outside of the Division of Natural Sciences to complete the required number of hours for graduation. The A.B. program is not considered sufficient training for graduate work in geology.

For S.B. in Geology the following are required:

GENERAL COLLEGE

English 1, 2, 3, 4
Foreign language (4 courses)
(French, German, or Spanish)
Chemistry 1-2-3
Social Science 1-2
Geology 41, 42
Mathematics 7, 8
Geography 38
Physical Education
Hygiene

UPPER COLLEGE

English 59
Physics 24-25
Geology 101, 102, 103
Geology 104, 105, 106
Geology 107, 108, 109
Geography 171 or equivalent
Geology 128-129 (summer field course)
Elective—4 courses, not geology

### Courses for Undergraduates

1. ELEMENTS OF GEOLOGY (5). Freshman elective.
*Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.50.*

41. INTRODUCTION TO PHYSICAL GEOLOGY (6).
*Four lecture and four laboratory hours a week, each quarter. Laboratory fee, $3.50 a quarter.* Messrs. MacCarthy, White, Ingram; Assistants.

42. INTRODUCTION TO HISTORICAL GEOLOGY (6). Prerequisite, Geology 41.
*Four lecture and four laboratory hours a week, each quarter. Laboratory fee, $3.50 a quarter.* Mr. Ingram; Assistants.

64. INTRODUCTION TO THE STUDY OF THE WEATHER (5).
*Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $3.50.* Mr. MacCarthy.

### Courses for Graduates and Advanced Undergraduates

101. MINERALOGY (6). Prerequisites, Chemistry 1-2 and Geology 41, or special permission.
*Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.*

102. PETROLOGY (5). Prerequisites, Geology 41 and 101.
*Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $5.00.*

103. FIELD GEOLOGY (5). Prerequisites, Geology 101, 102, Mathematics 41 or Geography 171.
*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.*

104. ADVANCED PHYSICAL GEOLOGY (5). Prerequisites, Geology 103, general physics.
*Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Mr. MacCarthy.

105. STRATIGRAPHY (5). Prerequisites, Geology 42 and Geology 104.
*Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, $5.00.*

106. INVERTEBRATE PALEONTOLOGY (5). Prerequisite, Geology 42.
*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.*

107. STRUCTURAL GEOLOGY (5). Prerequisites, Geology 103, general physics.
*Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, $5.00.*

108. ECONOMIC GEOLOGY (5). Prerequisite, Geology 107.
*Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $5.00.*

109. ELEMENTS OF GEOPHYSICS (5). Prerequisites, Geology 107, trigonometry, general physics.
*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Mr. MacCarthy.

117. SOILS (5). Prerequisites, Geology 41, Chemistry 1-2, or equivalent.
*Five hours a week, lectures and laboratory, spring quarter. Laboratory fee, $5.00.* Mr. Ingram.

121. GEOMORPHOLOGY (5). Prerequisites, Geology 41, 42.
*Five hours a week, on demand. Materials fee, $3.50.* Mr. White.

122. PHYSIOGRAPHY OF THE EASTERN UNITED STATES (5). Prerequisites, Geology 41, 42, and 104 or 121.
*Five hours a week, alternate years. Materials fee, $3.50.* Mr. White.

123. PHYSIOGRAPHY OF THE WESTERN UNITED STATES (5). Prerequisites, Geology 41, 42, and 104 or 121.
*Five hours a week, alternate years. Materials fee, $3.50.* Mr. White.

127. OIL GEOLOGY (5). Prerequisites, Geology 104, 105, 107.
*Four lecture and two laboratory hours a week, spring quarter. Materials fee, $3.50.*

128-129. SUMMER FIELD COURSES IN GEOLOGY (12). Prerequisites, Geology 101, 102, 103.
*Equivalent to twelve hours a week for one quarter.* Mr. White or Mr. Ingram.

144-145. PETROGRAPHY (5 each). Prerequisites, Geology 101, 102.
*Three lecture and four laboratory hours a week, fall and winter quarters, on demand. Laboratory fee, $5.00 a quarter.* Mr. White.

147. DETERMINATIVE MINERALOGY (6). Prerequisite, Geology 101.
*Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. White.

164. SYNOPTIC METEOROLOGY (5). Prerequisites, Geology 64, general physics or equivalent.
*Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $3.50.* Mr. MacCarthy.

166. VULCANOLOGY (5). Prerequisites, Geology 41 and, except by special permission, Geology 102.
This course serves as an introduction to vulcanism and related phenomena.
*Five lectures a week, winter quarter. Materials fee, $3.50.* Mr. MacCarthy.

168, 169. FIELD WORK IN GEOPHYSICS (5 each). Prerequisites, Geology 109, general physics.
*Given any quarter, on application. Materials fee, $5.00 each course.* Mr. MacCarthy.

## Courses for Graduates

221, 222, 223. ADVANCED STRUCTURAL GEOLOGY (5 each). Prerequisites, Geology 104, 105, 106, 107.
*Four lecture and two laboratory hours a week, 221, fall quarter; 222, winter quarter; 223, spring quarter. Laboratory fee, $5.00 each quarter.*

224, 225, 226. ADVANCED ECONOMIC GEOLOGY (5 each). Prerequisites, Geology 104, 105, 106, 108.
*Two lecture and six laboratory hours a week, 224, fall quarter; 225, winter quarter; 226, spring quarter. Laboratory fee, $3.50 each quarter.*

228-229. ADVANCED FIELD GEOLOGY (6 each). Prerequisite, Geology 128-129.
*Equivalent to six hours a week for two quarters. Laboratory fee, $3.50 each quarter.* Mr. MacCarthy or Mr. White.

241, 242, 243. ADVANCED MINERALOGY (5 each). Prerequisite, Geology 144-145, except by permission.
*Two lecture and six laboratory hours a week, on application. Laboratory fee, $5.00 each quarter.* Mr. White; Assistant.

244, 245, 246. ADVANCED PETROLOGY (5 each). Prerequisite, Geology 144-145.
*Two lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 each quarter.* Mr. White.

247, 248, 249. SEDIMENTATION (5). Prerequisites, Geology 104, 105, 106.
*Four lecture and two laboratory hours a week. Laboratory fee, $5.00 each quarter.* Mr. Ingram.

261, 262. APPLIED GEOPHYSICS (5 each). Prerequisites, Geology 109, mathematics through calculus.
*Three lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, $5.00 each quarter.* Mr. MacCarthy; Assistant.

265. THE PHYSICS OF THE EARTH: GEODYNAMICS (5). Prerequisites, Geology 104, and, except by special permission, Geology 107.
*Winter quarter. Materials fee, $3.50.* Mr. MacCarthy.

271, 272, 273. ADVANCED GEOMORPHOLOGY (5 each). Prerequisites, Geology 107 and 121.
*Five lecture hours a week.* Mr. White.

281, 282, 283. STRATIGRAPHY OF NORTH AMERICA (5 each). Prerequisites, Geology 104, 105, 106.
*Winter and spring quarters. Materials fee, $3.50.*

284. PRINCIPLES OF PALEONTOLOGY (5). Prerequisites, Zoology 41 or Botany 41, Geology 106.
*Fall quarter. Materials fee, $3.50.*

285, 286. ADVANCED PALEONTOLOGY (5 each). Prerequisite, Geology 284.
*Three lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, $5.00 each quarter.*

287. FORAMINIFERA (5). Prerequisite, Geology 106.
*Two lecture and six laboratory hours a week, winter quarter, on application. Laboratory fee, $5.00.*

288, 289. MICROPALEONTOLOGY (5 each). Prerequisite, Geology 287.
*Equivalent to five hours a week, each quarter, on application. Laboratory fee, $5.00 each quarter.*

### Research Courses

These courses are intended for applicants for advanced degrees. Laboratory work and conferences with the professor in charge of the work. Work in each of these courses may be continued under the same number with sub-letter designations.

321. RESEARCH IN STRUCTURAL GEOLOGY (5 or more).

329. RESEARCH IN ECONOMIC GEOLOGY (5 or more).

341. RESEARCH IN MINERALOGY (5 or more). Mr. White.

348. RESEARCH IN SEDIMENTATION (5 or more). Mr. Ingram.

349. RESEARCH IN PETROLOGY (5 or more). Mr. White.

361. RESEARCH IN GEOPHYSICS (5 or more). Mr. MacCarthy.

371. RESEARCH IN GEOMORPHOLOGY (5 or more). Mr. White.

381. RESEARCH IN STRATIGRAPHY (5 or more).

389. RESEARCH IN PALEONTOLOGY (5 or more).

## GEOGRAPHY

For A.B. with major in geography there are required, in addition to Geography 38 and Geology 41, six courses in Geography and six courses in allied studies, selected with the approval of the Head of the Department of Geology and Geography. Six courses must be taken outside the Division of Natural Science.

Geography 38 is recommended as preparation for all advanced geography courses.

## Courses for Undergraduates

38. INTRODUCTION TO GEOGRAPHY (6). Natural Science Credit.
*Five lecture and two laboratory hours a week, each quarter. Laboratory fee, $3.00.* Messrs. Emory, Gibson, Basile.

75. TRADE ROUTES AND TRADE CENTERS (5).
*Five lectures a week. Laboratory fee, $2.00.* Mr. Emory.

NOTE: Courses in Directed Teaching of High School Science and in Materials and Methods of Teaching High School Science will be found under the School of Education.

## Courses for Graduates and Advanced Undergraduates

117. SOILS (5). Prerequisites, Introductory Geology, Chemistry 1-2, or equivalent.
Same as Geology 117.
(1950-1951 and alternate years.) *Five hours a week, lectures and laboratory, spring quarter. Laboratory fee, $5.00.* Mr. Gibson.

118. LAND UTILIZATION MAPPING, RURAL OR URBAN (5).
*Laboratory fee, $3.50.* Messrs. Gibson, Emory.

131. GEOGRAPHY OF THE SOUTH (5).
Mr. Gibson.

132. LAND UTILIZATION AND SOIL CONSERVATION (5). Prerequisites, Geography 38 and Geology 41.
*Spring quarter.* Mr. Gibson.

151. URBAN GEOGRAPHY (5). Prerequisites, Geography 38 and two other courses in geography.
*Spring quarter.* Mr. Emory.

152. ECONOMIC GEOGRAPHY (5).
Mr. Basile.

153. POLITICAL GEOGRAPHY (5).
Mr. Emory.

154. GEOGRAPHICAL INFLUENCES IN AMERICAN HISTORY (5).
Mr. Emory.

155. CLIMATOLOGY (5).
Mr. Gibson.

156. CONSERVATION OF NATURAL RESOURCES (5).
Mr. Gibson.

157. GEOGRAPHY OF NORTH AMERICA (5).
Mr. Emory.

158. GEOGRAPHY OF EUROPE (5).
Mr. Basile.

159. GEOGRAPHY OF SOUTH AMERICA (5).
Mr. Basile.

160. GEOGRAPHY OF MIDDLE AMERICA (5). Mr. Basile.

171. CARTOGRAPHY (5).
*Two lecture and six laboratory hours a week. Laboratory fee, $5.00.* Mr. Gibson.

178, 179. FIELD COURSE IN GEOGRAPHY. Prerequisites, Geography 38, Geology 41. Messrs. Emory, Gibson, Basile.

### Courses for Graduates

201. ADVANCED CLIMATOLOGY (5). Prerequisite, graduate status in geography.
*Fall quarter.* Mr. Gibson.

211. SPECIAL WORK IN GEOGRAPHY (5 or more). Prerequisites, Geography 38, and two courses in the one hundred bracket.
*Five hours a week, each quarter.* Messrs. Gibson, Emory.

301. SEMINAR IN CLIMATOLOGY (5).
*Five hours a week, on demand.* Mr. Gibson.

302. URBAN FIELD COURSE (5). Prerequisite, graduate status in geography.
*On demand.* Mr. Emory.

311. RESEARCH IN GEOGRAPHY (5 or more).
Messrs. Emory, Gibson.

315. THESIS (5 or more).

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## DEPARTMENT OF GERMAN

Professors: RICHARD JENTE, G. S. LANE, W. P. FRIEDERICH
Associate Professor: F. E. COENEN
Assistant Professor: HERBERT W. REICHERT
Lecturer in German: ERNST MORWITZ
Instructors: H. L. KUEFNER, MARY J. LEE, B. T. MOSS, MARY G. PORTER, M. H. PRITCHETT
Teaching Fellow: J. L. HODGES

Students are requested to consult with the departmental adviser in regard to the requirements for a major in German.

### Courses for Undergraduates

1-2. ELEMENTARY GERMAN (10).
*Five hours a week, each quarter.* Mr. Reichert; Instructors.

3, 4. INTERMEDIATE GERMAN (10).
*Five hours a week, each quarter.* Mr. Coenen; Instructors.

14-15-16. BEGINNING GERMAN FOR ADVANCED STUDENTS (15).
*Five hours a week, fall, winter, and spring quarters.* Mr. Lane.

21, 22. INTRODUCTION TO GERMAN LITERATURE (5 each). Prerequisite, German 4, 16, or equivalent.
*Five hours a week, each quarter.* Messrs. Jente and Friederich.

24, 25. SCIENTIFIC GERMAN (5 each). Prerequisite, German 4 or equivalent. Open only to students with majors in a science.
*Five hours a week, each quarter.* Mr. Coenen.

31, 32. SPOKEN AND WRITTEN GERMAN (5 each). Prerequisite, German 4, 16, or equivalent.
*Five hours a week, each quarter.* Mr. Reichert.

RUSSIAN 76, 77. BEGINNING RUSSIAN (5 each).
*Five hours a week, on demand.* Mr. Lane.

## Courses for Graduates and Advanced Undergraduates

109. GERMAN PROSE IN THE NINETEENTH CENTURY (5). Prerequisite, German 22, or the equivalent.
*Winter quarter.* Mr. Coenen.

111. GERMAN DRAMA IN THE NINETEENTH CENTURY (5). Prerequisite, German 22, or the equivalent.
*Spring quarter.* Mr. Coenen.

115. THE GERMAN LYRIC FROM GOETHE TO THE PRESENT (5). Prerequisite, German 22, or the equivalent.
*Fall quarter.* Mr. Jente.

121. GOETHE'S EARLY WORKS (5). Prerequisite, German 22, or the equivalent.
*Winter quarter.* Mr. Jente.

122. GOETHE'S LATER WORKS (5). Prerequisite, German 22, or the equivalent.
*Spring quarter.* Mr. Friederich.

131. LESSING AND HIS CONTEMPORARIES (5). Prerequisite, German 22, or the equivalent.
*Spring quarter.* Mr. Friederich.

141. SCHILLER (5). Prerequisite, German 22, or the equivalent.
*Spring quarter.* Mr. Jente.

145. GERMAN PHONETICS (5). Prerequisite, German 31.
*One quarter, on demand.* Mr. Coenen.

151. CONTEMPORARY GERMAN LITERATURE (1885-1930) (5). Prerequisite, German 22, or the equivalent.
*Winter quarter.* Mr. Jente.

155. GOETHE IN ENGLISH TRANSLATION (Comparative Literature 155) (5).
*Spring quarter.* Mr. Friederich.

161. HISTORY OF THE GERMAN LANGUAGE (5). Prerequisite, a good reading knowledge of German.
*Fall quarter.* Mr. Lane.

171. GERMAN CIVILIZATION (5). Prerequisite, a knowledge of spoken German.
*Winter quarter.* Mr. Friederich.

## Courses for Graduates

201. MATERIALS AND METHODS OF RESEARCH (2½).
*One quarter, on demand.* Staff.

221. GOTHIC (5).
*Fall quarter.* Mr. Lane.

222. OLD HIGH GERMAN (5).
*Winter quarter.* Mr. Lane.

223. COMPARATIVE GERMANIC GRAMMAR (5).
*Spring quarter.* Mr. Lane.

232. OLD SAXON (5).
*One quarter, on demand.* Mr. Lane.

233, 234. OLD NORSE (5 each).
*Two quarters, on demand.* Mr. Lane.

235, 236. MIDDLE HIGH GERMAN (5 each).
*Two quarters, on demand.* Mr. Jente.

240, 241. READING COURSE (10).
*Through the year.* Mr. Friederich.

252. THE RENAISSANCE AND REFORMATION (1400-1600) (5).
*Fall quarter.* Mr. Jente.

253. FROM OPITZ TO GOTTSCHED (5).
*Winter quarter.* Mr. Friederich.

261. PHILOSOPHICAL INFLUENCES ON GERMAN CLASSICISM AND ROMANTICISM (5).
*Spring quarter.* Mr. Reichert.

262. THE ROMANTIC SCHOOL IN GERMANY (5).
*Spring quarter.* Mr. Coenen.

341, 342. SEMINAR IN LITERATURE (5 each).
*Five hours a week, according to need.* Messrs. Jente, Friederich.

361, 362. SEMINAR IN LINGUISTICS (5 each).
*Five hours a week, according to need.* Mr. Lane.
395. RESEARCH (5).

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## GREEK

(See Classics)

## DEPARTMENT OF HISTORY

Professors: A. R. NEWSOME, W. W. PIERSON, M. B. GARRETT, W. E. CALDWELL, L. C. MACKINNEY, H. T. LEFLER, F. M. GREEN, *R. D. W. CONNOR, C. H. PEGG, CECIL JOHNSON, J. C. SITTERSON, J. L. GODFREY, J. W. PATTON

Assistant Professors: H. A. BIERCK, JR., C. O. CATHEY, J. E. KING, F. W. KLINGBERG

Instructors: J. R. CALDWELL, J. B. MACLEOD, H. H. CUNNINGHAM, S. E. FOWLER, E. H. GIBSON, F. D. LAURENS, E. A. MILES, A. N. SANDERS, J. B. SCROGGS, D. C. SOSSOMON, MRS. JULIA SPRUILL, J. F. STEELMAN, MRS. LALA STEELMAN, D. H. STOUT, E. E. STROWD, W. W. THOMAS, R. W. WILLIAMS

Teaching Fellows: CHARLES C. MARTIN, BLACKWELL P. ROBINSON, MRS. ELIZABETH SHREVE RYAN

Waddell Memorial Fellows: ALVIN LEROY DUCKETT, CHARLES G. SELLERS

Graduate Assistant: NANCY BEAM FUNDERBURK

A student choosing history as his department of major interest must elect either American history or European history as his field of specialization and complete a minimum of six approved courses. The requirement for the major in American history shall be eight approved courses if the student has not completed History 21 and 22 or History 71 and 72 with a minimal grade of C; and for a major in European history a like number (eight) if the student has not completed History 41 and 42, or History 44 and 45, or History 48 and 49 with a minimal grade of C. The student must take at least four of his six or five of his eight courses in his field of specialization; he may elect the remaining two or three courses of his major from the other field. History 41 and 42 or History 44 and 45, or History 48 and 49 may be credited toward a major in American history, and History 71 and 72 may be credited toward a major in European history. Transfer students who major in history must take at least three approved history courses in the University.

### Courses for Undergraduates

1-2. SOCIAL SCIENCE (10). Freshman requirement. Prerequisite to all other courses in history.

*Five hours a week for two quarters. Fee for materials, $1.00 each quarter.* Members of staff.

21, 22. AMERICAN HISTORY: GENERAL COURSE (10). Sophomore elective.

*Five hours a week, fall, winter, and spring quarters.* Messrs. Johnson and J. R. Caldwell.

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*Deceased, February 25, 1950.

41, 42. ANCIENT AND MEDIEVAL HISTORY: GENERAL COURSE (10). Sophomore elective, open to juniors and seniors.
*Five hours a week, winter and spring quarters.* Messrs. Caldwell and MacKinney.

44, 45. ENGLISH HISTORY: GENERAL COURSE (10). Sophomore elective, open to juniors and seniors.
*Five hours a week, winter and spring quarters.* Mr. Godfrey.

48. MODERN EUROPEAN HISTORY, 1500-1815 (5). Sophomore elective, open to juniors and seniors.
*Fall quarter.* Mr. Garrett.

49. MODERN EUROPEAN HISTORY SINCE 1815 (5). Sophomore elective, open to juniors and seniors.
*Spring quarter.* Mr. Garrett.

51. HISTORY OF THE ANCIENT NEAR EAST (5).
*Fall quarter.* Mr. Caldwell.

52. HISTORY OF GREECE (5).
*Winter quarter.* Mr. Caldwell.

53. HISTORY OF ROME (5).
*Spring quarter.* Mr. Caldwell.

65. EUROPE IN THE CRUSADING AGE, 1000-1300 (5).
*Fall quarter.* Mr. MacKinney.

66. THE AGE OF THE RENAISSANCE, 1250-1550 (5).
*Winter quarter.* Mr. MacKinney.

71. AMERICAN HISTORY TO 1865: GENERAL COURSE (5). Junior-senior elective.
Both 21 and 71 may not be taken for credit by a student.
*Fall, winter, and spring quarters.* Messrs. Lefler, Sitterson, Klingberg, and Cathey.

72. AMERICAN HISTORY SINCE 1865: GENERAL COURSE (5). Junior-senior elective.
Both 22 and 72 may not be taken for credit by a student.
*Fall, winter, and spring quarters.* Messrs. Lefler, Sitterson, Klingberg, and Cathey.

90. LATIN AMERICAN HISTORY: COLONIAL AND REVOLUTIONARY PERIODS (5).
*Fall quarter.* Mr. Bierck.

91. LATIN-AMERICAN COUNTRIES DURING THE NATIONAL PERIOD (5).
*Winter quarter.* Mr. Bierck.

97. HONORS COURSE (5).
Required of all students reading for honors in history.

98. HONORS COURSE (5).
Required of all students reading for honors in European history.

99. HONORS COURSE (5).
Required of all students reading for honors in United States history.

NOTE: Courses in Directed Teaching of the Social Sciences and in Materials and Methods of Teaching the Social Sciences will be found under the School of Education.

## Courses for Graduates and Advanced Undergraduates

109. GREEK AND ROMAN HISTORICAL LITERATURE (Classics 109) (5).
*Winter quarter.* Mr. Allen (of the Department of Classics).

110. EUROPEAN COLONIZATION OF THE NEW WORLD (5). Not open to graduate majors in American history.
*Fall quarter.* Mr. Johnson.

111. EARLY AMERICAN HISTORY, 1689-1789 (5). Not open to graduate majors in American history.
*Winter quarter.* Mr. Lefler.

112. UNITED STATES HISTORY, 1789-1848 (5). Not open to graduate majors in American history.
*Winter quarter.* Mr. Newsome.

113. UNITED STATES HISTORY, 1848-1897 (5). Not open to graduate majors in American history.
*Spring quarter.* Mr. Klingberg.

114. UNITED STATES HISTORY SINCE 1897 (5). Not open to graduate majors in American history.
*Spring quarter.* Mr. Sitterson.

121. MEDIEVAL CULTURAL LIFE (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. MacKinney.

122. SOCIAL-ECONOMIC HISTORY OF THE MIDDLE AGES (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. MacKinney.

123. HISTORY OF SPAIN (5).
(1949-1950 and alternate years.) *Winter quarter.* Mr. MacKinney.

130. EUROPEAN FOUNDATIONS OF MODERN EDUCATION (Education 142) (5).
*Winter quarter.* Mr. Knight (of the School of Education).

131. THE PROTESTANT REVOLT (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Garrett.

132. THE RISE OF ABSOLUTISM IN EUROPE (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Garrett.

133. THE FRENCH REVOLUTION AND THE NAPOLEONIC PERIOD (5).
*Winter quarter.* Mr. Garrett.

134. RISE OF DEMOCRACY AND NATIONALISM IN MODERN EUROPE (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Garrett.

135. EUROPE, 1870-1918 (5).
*Winter quarter.* Mr. Garrett.

136. EUROPE SINCE 1918 (5).
*Spring quarter.* Mr. Pegg.

137. MEDIEVAL ENGLAND (5).
(1950-1951 and alternate years.) *Winter quarter.* Mr. MacKinney.

138. ENGLAND FROM 1485 TO 1760 (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Godfrey.

139. GREAT BRITAIN FROM 1760 TO 1867 (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Godfrey.

140. GREAT BRITAIN SINCE 1867 (5).
*Winter quarter.* Mr. Godfrey.

141. DEVELOPMENT OF THE ENGLISH CONSTITUTION (Political Science 154) (5).
*Fall quarter.* Mr. Godfrey.

142. HISTORY OF MODERN RUSSIA (5).
*Fall quarter.* Mr. Pegg.

143. THE DIPLOMATIC HISTORY OF THE UNITED STATES (5).
*Spring quarter.* Mr. Johnson.

159. THE BRITISH EMPIRE (Political Science 159) (5).
*Spring quarter.* Mr. Godfrey.

161. NORTH CAROLINA I, 1584-1815 (5).
*Fall quarter.* Mr. Lefler.

162. NORTH CAROLINA II, 1815-1948 (5).
*Spring quarter.* Mr. Newsome.

163. THE OLD SOUTH (5).
*Fall quarter.* Mr. Green.

164. THE SOUTH SINCE RECONSTRUCTION (5).
*Spring quarter.* Mr. Green.

167. ECONOMIC HISTORY OF THE UNITED STATES I, 1783-1860 (5).
(1950-1951 and alternate years.) *Winter quarter.* Mr. Sitterson.

168. ECONOMIC HISTORY OF THE UNITED STATES II, 1860-1941 (5).
(1949-1950 and alternate years.) *Winter quarter.* Mr. Sitterson.

170. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES (Education 143) (5).
*Fall quarter.* Mr. Knight (of the School of Education).

171. ARGENTINA, BRAZIL, AND CHILE (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Bierck.

172. INTER-AMERICAN ECONOMIC AND CULTURAL RELATIONS (5).
*Spring quarter.* Mr. Bierck.

173. THE BOLIVARIAN STATES SINCE INDEPENDENCE (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Bierck.

175. THE CONSTITUTION OF THE UNITED STATES (Political Science 155) (5).
*Fall, winter and spring quarters. Materials fee, $1.00.* Mr. Jenkins (of the Department of Political Science).

## Courses for Graduates

201ab. HISTORIOGRAPHY (6). Required of all graduate students in history. *Three hours a week, fall and winter quarters.* Messrs. Caldwell and Newsome.

206. GREEK HISTORY, 500-146 B.C. (5).
(1949-1950.) *Fall quarter.* Mr. Caldwell.

207. ROMAN HISTORY, 133-31 B.C. (5).
(1949-1950.) *Spring quarter.* Mr. Caldwell.

208. ROMAN HISTORY, 31 B.C.-180 A.D. (5).
(1950-1951.) *Fall quarter.* Mr. Caldwell.

224. THE AGE OF THE RENAISSANCE, 1250-1550 (5).
*Spring quarter.* Mr. MacKinney.

233. THE FRENCH REVOLUTION AND THE NAPOLEONIC PERIOD (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Garrett.

236. RECENT AND CONTEMPORARY EUROPEAN HISTORY (5).
*Winter quarter.* Mr. Pegg.

249. CIVILIZATION IN THE AMERICAN COLONIES (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Lefler.

250. THE AMERICAN REVOLUTION AND ITS BACKGROUND (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Lefler.

251. THE FEDERAL PERIOD, 1783-1815 (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Newsome.

252. THE MIDDLE PERIOD, 1815-1860 (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Newsome.

254. CIVIL WAR AND RECONSTRUCTION (5).
(1950-1951 and alternate years.) *Winter quarter.* Mr. Green.

255. FOUNDATIONS OF MODERN AMERICA (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Klingberg.

256. RECENT AND CONTEMPORARY UNITED STATES (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Sitterson.

271. LATIN-AMERICAN HISTORY: THE COLONIAL PERIOD AND THE WARS OF INDEPENDENCE (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Bierck.

272. LATIN-AMERICAN HISTORY: DEVELOPMENT OF NATIONALITY IN SOUTH AMERICA (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Bierck.

301a. ANCIENT HISTORY (3).
Conference and reports.
*Winter quarter.* Mr. Caldwell.

311a. MEDIEVAL HISTORY (3).
Conference and reports.
*Fall quarter.* Mr. MacKinney.

321ab. MODERN EUROPEAN HISTORY (6).
Conference and reports.
*Fall and winter quarters.* Mr. Pegg.

323ab. MODERN ENGLISH HISTORY (6).
Conference and reports.
*Fall and winter quarters.* Mr. Godfrey.

331a. AMERICAN COLONIAL HISTORY (3).
Conference and reports.
*Winter quarter.* Mr. Lefler.

333ab. HISTORY OF THE UNITED STATES, 1783-1860 (6).
Conference and reports.
*Fall and spring quarters.* Mr. Newsome.

335abc. HISTORY OF THE SOUTH (9).
Conference and reports.
*Fall, winter, and spring quarters.* Mr. Green.

337a. RECENT HISTORY OF THE UNITED STATES (3).
Conference and reports.
*Fall quarter.* Mr. Sitterson.

341. READING COURSE (5).
*Any quarter.* Members of the graduate faculty.

370a. LATIN-AMERICAN HISTORY (3).
Conference and reports.
*Winter quarter.* Mr. Bierck.

370b. LATIN-AMERICAN HISTORY (3).
Conference and reports.
*Spring quarter.* Mr. Pierson.

375. THESIS COURSE (5 or 10).
*Any quarter.* Members of the graduate faculty.

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## *DEPARTMENT OF JOURNALISM

Professors: O. J. COFFIN, C. P. RUSSELL, †J. ROY PARKER, WALTER SPEARMAN
Associate Professor: STUART W. SECHRIEST
Assistant Professor: J. L. MORRISON
Instructor: LOLA LEE MUSTARD
Lecturers: LEON M. POLLANDER (Advertising), THOMAS J. LASSITER (Small Newspaper Management)

*Curriculum Leading to the Degree of A.B. in Journalism:* The course of study for the first two years is the same as that required of other candidates for the A.B. degree. The following courses are specified in the junior and senior years: one course in economics, two

*On February 6, 1950, by action of the Board of Trustees, the Department of Journalism was made the School of Journalism, with Oscar J. Coffin as dean. This change will be effective September 1, 1950.
†Absent on leave, 1949-1950.

courses in American history or North Carolina history, two courses in political science (American government), six to eight courses in journalism, electives to complete hours for the A.B. degree.

## Courses for Undergraduates

30. COLLEGE REPORTING.
A course with a maximum credit of five quarter hours for reporting done on the student newspaper under the supervision of the Department of Journalism. Registration with department required.

31. COLLEGE EDITING.
A similar credit course for those who do the editorial work of the student newspaper. Registration with Department required.

53. NEWS WRITING I (5). Prerequisite for Journalism 54.
*Fall, winter, and spring quarters. Laboratory fee, $2.00.* Messrs. Spearman, Morrison, Sechriest, Miss Mustard.

54. NEWS WRITING II (5). Prerequisite, Journalism 53 or the equivalent.
*Fall, winter, and spring quarters. Laboratory fee, $2.00.* Messrs. Spearman, Morrison, Sechriest, Miss Mustard.

55. NEWS WRITING III (5). Prerequisites, Journalism 53 and 54 or the equivalent.
*Fall, winter, and spring quarters. Laboratory fee, $2.00.* Messrs. Coffin, Spearman.

56abc. FEATURE WRITING (3 each).
*Fall, winter, and spring quarters.* Mr. Coffin.

57. NEWS METHODS AND TREATMENTS (5). Prerequisite, Journalism 53 or 54.
*Fall, winter, and spring quarters. Laboratory fee, $5.00.* Mr. Sechriest.

58. EDITORIAL WRITING (3).
*Fall, winter, and spring quarters.* Mr. Coffin.

59. COUNTRY NEWSPAPER PRODUCTION (5).
*Fall and spring quarters. Laboratory fee, $2.00.* Mr. Lassiter.

60. BOOK REVIEWING AND DRAMATIC CRITICISM FOR NEWSPAPERS (3).
*Winter quarter.* Mr. Spearman.

61. HISTORY OF JOURNALISM (3).
*Fall and spring quarters.* Mr. Russell.

62. NEWSPAPER ADVERTISING I (5).
*Fall, winter, and spring quarters. Laboratory fee, $2.00.* Mr. Pollander, Miss Mustard.

63. NEWSPAPER ADVERTISING II (6). Prerequisite, Journalism 62.
*Fall and spring quarters. Laboratory fee, $2.00.* Mr. Pollander.

64, 65, 66. CREATIVE WRITING (5 each). Instructor's permission necessary.
*Continuing courses, one taught each quarter.* Mr. Russell.

NOTE: These courses elective, by arrangement with the instructor, to those with majors in other fields. See English 53.

73. RADIO JOURNALISM (5).
*Winter and spring quarters. Laboratory fee, $2.00.* Mr. Morrison.

74. BUSINESS JOURNALISM (3).
*Fall and winter quarters.* Mr. Morrison.

80. NEWS PHOTOGRAPHY (3). Instructor's permission necessary.
*Fall, winter, and spring quarters. Laboratory fee, $5.00.* Mr. Sechriest.

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## LATIN

(See Classics)

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## DEPARTMENT OF LIBRARY SCIENCE

Professor: SUSAN G. AKERS
Assistant Professor: MARGARET E. KALP

The courses listed below may be taken by advanced undergraduates in the College of Arts and Sciences with the approval of the Dean of the School of Library Science. They are planned for students who wish to meet the requirements for certification as part- or full-time school librarians in North Carolina. Besides the courses listed below the student will take the courses in education required for certification and a major or minor program in English, French, Latin, mathematics, natural science, or social science. These programs are outlined in the General Catalogue under the School of Education.

Students who choose a major program in library science will take all of the courses listed below; those who choose a minor program will omit Library Science 96 and take 95 as a 3-hour course.

### Courses for Undergraduates

94. PLACE OF THE LIBRARY IN THE SCHOOL (3).
*Fall quarter.* Miss Kalp.

95. SELECTION AND USE OF REFERENCE MATERIALS (3 or 5).
*Fall quarter.* Miss Kalp.

96. CATALOGUING AND CLASSIFICATION FOR SCHOOL LIBRARIES (5).
*Winter quarter.* Miss Kalp.

122. THE SELECTION OF BOOKS AND RELATED MATERIALS FOR YOUNG PEOPLE (5).
*Winter quarter.* Miss Kalp.

123. THE SELECTION OF BOOKS AND RELATED MATERIALS FOR CHILDREN (5).
*Spring quarter.* Miss Kalp.

143. SCHOOL LIBRARY ORGANIZATION AND ADMINISTRATION (5).
*Spring quarter.* Miss Kalp.

## DEPARTMENT OF MATHEMATICAL STATISTICS

Professors: HAROLD HOTELLING, RAJ CHANDRA BOSE, SAMARENDRA NATH ROY

Associate Professor: HERBERT E. ROBBINS

Assistant Professors: GEORGE EDWARD NICHOLSON, JR., WASSILY HOEFFDING

Graduate Assistant: SUDHISH GOVIND GHURYE

This department is devoted chiefly to graduate teaching and to research in the theory and methods of statistics, but qualified undergraduates are admitted to courses with numbers below 200. The minimum prerequisite for courses with numbers above 130 is advanced calculus or similar mathematics higher than elementary integral calculus, and additional mathematics is valuable for statisticians and teachers of statistics.

The Institute of Statistics of the University of North Carolina includes the Department of Mathematical Statistics at Chapel Hill and the Department of Experimental Statistics at Raleigh. Schedules and transportation are arranged so that students can work in both departments. A separate Announcement of Graduate Work in Statistics gives additional information regarding the work of the Institute of Statistics, courses, requirements for degrees, and opportunities for statisticians. See also p. 390 of this catalogue.

The attention of students of statistics is called to closely related courses in other departments, especially to Mathematics 110 (Finite Differences), Philosophy 134 and 235 (Symbolic Logic), Physics 221 (Statistical Mechanics), Chemistry 284, 285 (Statistical Problems in Chemistry), Economics 170 (Economic Statistics), 172 (Analysis of Economic Time Series), 173 (Correlation Analysis), and Psychology 132, 230, and 234.

### Courses For Graduates and Advanced Undergraduates

*100. PRINCIPLES OF STATISTICAL INFERENCE (5). Prerequisite, college algebra.

An introduction to fundamental concepts of statistical inference, using as little mathematics as possible. Emphasis on comprehension and interpretation. The probability basis of statistics. The most common statistical techniques, illustrated with data from biological, psychological, economic, and other fields. Designed to supplement courses given in departments of application.

*Fall and winter quarters.* Mr. Nicholson.

NOTE: No credit is given to graduate students majoring in mathematical statistics.

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*This course carries no course or hour credit for the bachelor's degrees.

*104. INTRODUCTION TO STATISTICS I (5). Prerequisite, integral calculus.

Classification of data. Distributions. Probability. Moments. Order statistics. Binomial, Poisson, and normal distributions. Nature of statistical hypotheses. Testing hypotheses. Efficiency of tests and estimates. Large-sample theory. Practical applications.

*Winter quarter.* Mr. Nicholson.

NOTE: No credit is given to graduate students majoring in mathematical statistics.

*105. INTRODUCTION TO STATISTICS II (5). Prerequisite, Mathematical Statistics 104.

A continuation of 104. Regression and correlation from the point of view of least squares and the analysis of variance. Bivariate and multivariate distributions. Theory and application of chi tests. Efficient designs of experiments. Illustrations from numerous fields of application.

*Spring quarter.* Mr. Nicholson.

NOTE: No credit is given to graduate students majoring in mathematical statistics.

*126. SAMPLE SURVEYS (Sociology 196) (5). Prerequisites, Statistics 104-105 or Statistics 131, 132.

Illustration of the basic ideas of probability, expectation, variance, and correlation by model sampling experiments. Random sampling. Sampling with or without replacement from a finite population. Stratification, cluster sampling, selection of clusters with probability proportional to size. Subsampling. Double sampling. Lack of response. Variability of response. Optimum allocation of resources in surveys. Cost and variance functions. Questionnaire construction. Interviewing techniques.

*Spring quarter.* Mr. Bose.

*131. ELEMENTARY PROBABILITY (5). Prerequisite, advanced calculus.

Logical foundations. Permutations and combinations. Variates, expectations, moments, and cumulants. Characteristic functions. Limit theorems. Laws of great numbers.

*Fall quarter.* Mr. Robbins.

*132. STATISTICAL INFERENCE (5). Prerequisite, Statistics 131.

Fundamentals of the use of observations to test hypotheses and estimate unknown quantities. The accuracy of means and variances. Illustrations from physical, biological, and social sciences.

*Winter quarter.* Mr. Robbins.

*133. LEAST SQUARES AND TIME SERIES (5). Prerequisites, Statistics 132 and Mathematics 147 (matrices).

The method of least squares, with probability interpretations, and applications to social and natural sciences. Time series problems, including trends, seasonal variations, periodicities, correlations.

*Spring quarter.* Mr. Hotelling.

*143. SEQUENTIAL ANALYSIS (5). Prerequisite, Statistics 132.

Methods in which the number of observations is not predetermined but depends on the observations themselves. Applications to design of experiments and industrial quality control.

*Spring quarter.* Mr. Hoeffding.

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*Courses numbered 100-183 inclusive carry no course or hour credit for the bachelor's degrees.

*144. CORRELATION, CONTINGENCY, AND CHI TESTS (5). Prerequisite, Statistics 132.

Meaning of correlation. Multivariate distributions. Tests of simple, partial, and multiple correlations, with exact and approximate probabilities. Tests of independence of cross-classifications, and of goodness of fit.

*Fall quarter.* Mr. Roy.

*145. MULTIVARIATE ANALYSIS (5). Prerequisites, Statistics 144 and Mathematics 147 (matrices).

Tests of hypotheses involving several correlated variates. Multivariate analysis of variance. Relations between sets of variates. Canonical correlations. Applications to factor analysis in psychology.

*Winter quarter.* Mr. Roy.

*147. ANALYSIS OF VARIANCE AND COVARIANCE (5). Prerequisites, Statistics 131 and Mathematics 147 (matrices); corequisite, Statistics 132.

Unbiased linear estimates, Markoff's theorem, sum of squares belonging to one or more degrees of freedom, tests of linear hypotheses, power functions of the t and F tests, n-way classifications, missing variates, interaction, components of variance, variate transformations to insure homoscedasticity, analysis of covariance, applications.

*Fall quarter.* Mr. Bose.

*153. RANK ORDER STATISTICS AND NON-PARAMETRIC INFERENCE (5). Prerequisite, Statistics 132.

Estimation and testing of hypotheses when the functional form of the underlying distribution is unknown. Rank order statistics, rank and sign tests, and tests based on permutations of observations. Theory of runs. Non-parametric tolerance limits.

*Winter quarter.* Mr. Hoeffding.

*182. MATHEMATICAL ECONOMICS (Economics 182) (5). Prerequisite, Mathematics 171 (advanced calculus); corequisite, Mathematics 147 (matrices).

Perfect and imperfect competition. Monopoly. Utility vs. ranking of preferences. Relations between commodities. General equilibrium. Effects of taxes and controls of various kinds. Index numbers.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Hotelling.

*183. ADVANCED MATHEMATICAL ECONOMICS (3). Prerequisites, Statistics 182 and Mathematics 141 (differential equations).

Dynamic variations in the economy. Development of elements of the calculus of variations and of stochastic difference equation theory, with applications to economic problems. Mathematical treatment of business cycles. Valuation of property taking account of depreciation and depletion. Most profitable rates of exploitation of mineral and biological resources. Relation of private exploitation to the public welfare and effects of various taxes and regulations.

(1950-1951 and alternate years.) *Winter quarter.* Mr. Hotelling.

## Courses for Graduates

216. ADVANCED MULTIVARIATE ANALYSIS (5). Prerequisite, Statistics 145.

Recent advances, including determinantal equations used in statistics, the problem of the rank of a set of observed variates, and some aspects of factor analysis.

*Spring quarter.* Mr. Roy.

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*Courses numbered 100-183 inclusive carry no course or hour credit for the bachelor's degrees.

225. THEORY OF ESTIMATION AND TESTING HYPOTHESES (5). Prerequisite, Statistics 132.

Consistent, efficient and sufficient statistics. Unbiased estimates of minimum variance. Maximum likelihood estimates. The theory of testing hypotheses. The theory of confidence intervals.

*Fall quarter.* Mr. Hoeffding.

230. INTERMEDIATE PROBABILITY (5). Prerequisites, Statistics 131 and Mathematics 176 (complex variables).

The general theory of measure and integration, with special reference to random variables. Properties of characteristic functions. Central limit theorems.

*Spring quarter.* Mr. Robbins.

231. ADVANCED PROBABILITY (5). Prerequisite, Statistics 230 or its equivalent.

Continuation of Statistics 230. Probability distributions in spaces of an infinite number of dimensions. Strong convergence and ergodic theory.

(Not offered in 1949-1950 or 1950-1951.) *Spring quarter.* Mr. Robbins.

235. STOCHASTIC PROCESSES (5).

(Not offered in 1950-1951.)

250. MATHEMATICS OF EXPERIMENTAL DESIGN (5). Prerequisites, Statistics 132 and 147.

Unified mathematical theory for the analysis of data from experimental designs. Applications to randomized blocks, Latin squares, lattice designs, balanced and partially balanced incomplete block designs, and Youden's squares. Modification for missing plots. Intra-block and inter-block analysis. Split plot and factorial designs. Application of the methods of modern algebra and finite geometry to the combinatorial problems arising in the design of experiments.

*Winter quarter.* Mr. Bose.

352. SEMINAR ON THEORETICAL AND APPLIED STATISTICS (5). Prerequisite, work more advanced than Statistics 132.

353. SEMINAR IN ADVANCED MATHEMATICAL STATISTICS (5). Prerequisite, a course requiring Statistics 132 as prerequisite; also a knowledge of matrices, finite differences, and complex variables.

*Winter quarter.* Mr. Hotelling.

361, 362, 363. SPECIAL PROBLEMS (5 each).

371, 372, 373. ADVANCED RESEARCH (5 each).

## DEPARTMENT OF MATHEMATICS

Professors: W. M. WHYBURN, T. F. HICKERSON, J. W. LASLEY, JR., A. W. HOBBS, E. T. BROWNE, E. L. MACKIE, J. B. LINKER, M. A. HILL, A. S. WINSOR, R. M. TRIMBLE, V. A. HOYLE, E. A. CAMERON, A. T. BRAUER

Associate Professor: L. L. GARNER

Assistant Professor: I. R. HERSHNER, JR.

Instructor: W. R. MANN

Part-time Instructors: MARGARET SEELBINDER, G. C. CALDWELL, G. W. CAROW, A. S. DAVIS, C. S. GOODRUM, B. B. GRESHAM, EMILIE HAYNSWORTH, A. K. HINDS, H. T. LABORDE, BETTY LIDE, S. A. MCLEOD, NATHANIEL MACON, G. W. MEDLIN, P. D. MINTON, LEO MOSER, G. B. PARRISH, A. H. PAYNE, T. J. PIGNANI, T. L. REYNOLDS, F. E. ROSS, B. M. SEELBINDER, ELIZABETH SNOW, PAUL SWOFFORD, R. Z. VAUSE, HERBERT WOLF

Teaching Fellows: G. S. BRUTON, J. H. WAHAB

For the degree of A.B. with major in mathematics there are required:

I. From six (6) to eight (8) courses beyond Mathematics 31. These courses shall include:

(a) Mathematics 32, 33, 36; or 34-35, 36; or their equivalent.

(b) At least three (3) courses numbered 100 or above, of which two (2) or more shall be in pure mathematics.

II. From five (5) to seven (7) courses from the departments of Botany, Chemistry, Geology, Philosophy, Physics, Psychology, Zoology.

III. From five (5) to seven (7) courses outside the Division of Natural Sciences.

Those students who plan to teach in the public schools should read the statement on pages 146-47.

The following curriculum leading to the Bachelor of Science degree in Mathematics is now available:

FRESHMAN YEAR

Mathematics 7, 8, 31
Social Science 1, 2
English 1, 2
French or German—Two courses of one language
Hygiene 11 and freshman physical education

SOPHOMORE YEAR

Mathematics 34-35, 36; or 32, 33, 36
English 3, and 4 or 5 or 6 or elective in the fine arts; or two courses in classical language or literature
French or German—Two courses, continuing the language begun in the first year
Physics 24, 25; or 34, 35; or Chemistry 1, 2, 3 (or 1, 2, 31), if the two physics courses are elected in the junior or senior years
Sophomore physical education

JUNIOR AND SENIOR YEARS

Six courses in mathematics, including 141, and 131 or 136
Six divisional courses of which one must be Botany 41 or Zoology 41, and among which no mathematics courses except Mathematics 41 and/or 51 may be included
Four non-divisional courses
Two free electives

Before registering for Mathematics R or Mathematics 7, each student is required to take a mathematics placement test.

## Courses for Undergraduates

A. PLANE GEOMETRY (0).
*Five hours a week, each quarter during 1949-1950.* Staff.

R. INTERMEDIATE ALGEBRA (0).
*Five hours a week, each quarter during 1949-1950.* Staff.

7X. COLLEGE ALGEBRA (5).
This course is for students who have taken and passed Mathematics R.
*Each quarter.* Staff.

7. COLLEGE ALGEBRA (5).
*Each quarter.* Staff.

8. PLANE TRIGONOMETRY (5).
*Each quarter.* Staff.

9. TRIGONOMETRY AND MATHEMATICS OF FINANCE (5).
*Each quarter.* Staff.

31. PLANE ANALYTIC GEOMETRY (5). Prerequisites, Mathematics 7 and 8.
*Each quarter.* Messrs. Lasley, Hobbs, Winsor, Linker, Hoyle.

32. DIFFERENTIAL CALCULUS (5). Prerequisite, Mathematics 31.
*Each quarter.* Messrs. Lasley, Hobbs, Mackie, Garner.

33. INTEGRAL CALCULUS (5). Prerequisite, Mathematics 32.
*Winter and spring quarters.* Messrs. Mackie, Hoyle.

34-35. INTENSIVE COURSE IN THE DIFFERENTIAL AND INTEGRAL CALCULUS (10). Prerequisite, Mathematics 31.
A two-quarter course in which calculus principles and operations share emphasis. Designed especially for majors in mathematics and closely related fields.
*Five hours a week, fall and winter quarters.* Mr. Mackie.

36. TOPICS IN CALCULUS (5). Prerequisite, Mathematics 33 or 35.
Partial differentiation, limits and continuity, multiple integrals, series.
*Five hours a week, spring quarter.* Mr. Mackie.

41. MECHANICAL DRAWING (5).
*Six hours a week, fall quarter. Laboratory fee, $1.00.* Mr. Trimble.

42. DESCRIPTIVE GEOMETRY (3).
*Lectures and laboratory, six hours a week, winter quarter. Laboratory fee, $1.00.* Mr. Trimble.

51. PLANE SURVEYING (5). Prerequisites, Mathematics 7 and 8.
*Four lecture and two field hours a week, fall or spring quarter. Laboratory fee, $4.00.* Mr. Trimble.

62. INTRODUCTORY STATISTICS (5). Prerequisites, Mathematics 7 and 8 or 9.
*Fall quarter.* Mr. Hill.

## Courses for Graduates and Advanced Undergraduates

102. ELEMENTARY ALGEBRA FROM AN ADVANCED VIEWPOINT (5). Prerequisite, Mathematics 33.
Designed especially for teachers, the course treats topics of algebra in a way that provides both the skill and the mathematical maturity needed for good instruction in the subject. Among the topics included are: rational, real, and complex numbers; systems of equations; determinants; probability.
*Fall quarter.* Mr. Hill.

103. COLLEGE GEOMETRY (5). Prerequisite, Mathematics 33.
A triangle and its associated circles. Orthogonal circles and inverse points. Poles and polars. Coaxal circles. Isogonal lines. Similitude. Inversion. Brocard's figures. Lemoine circles.
*Winter quarter.* Mr. Winsor.

110. CALCULUS OF FINITE DIFFERENCES (5). Prerequisite, Mathematics 33 or equivalent.
Differencing functions, summation of series, relations among operators, interpolation formulas, Bernoulli's and Euler's polynomials, solution of difference equations.
*Spring quarter.* Mr. Garner.

111. ELEMENTARY MATHEMATICAL STATISTICS (5). Prerequisite, Mathematics 33 or equivalent.
A course dealing with elementary theory and applications, with special emphasis on the mathematical development of frequency curves, correlation, sampling, etc.
*Winter quarter.* Mr. Hill.

121. THEORETICAL AND APPLIED MECHANICS: STATICS (5). Prerequisite, Mathematics 32.
Force systems; friction; centroids; moment of inertia. This course and its sequels, 122 and 123, are basic requirements in engineering and architecture.
*Fall quarter.* Mr. Hickerson.

122. THEORETICAL AND APPLIED MECHANICS: KINEMATICS AND KINETICS (5). Prerequisite, Mathematics 33.
Motion of particles and rigid bodies; force, mass, and acceleration; work and energy; impulse and momentum; vibrations.
*Winter quarter.* Mr. Hickerson.

123. STRENGTH OF MATERIALS (6). Prerequisite, Mathematics 121.
Stresses and strains in structural materials; riveted and welded joints; torsion and bending; stresses in beams and columns; deflection of beams; special topics.
*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $4.00.* Messrs. Hickerson and Trimble.

124. HYDRAULICS (5). Prerequisites, Mathematics 121, 123.
(1949-1950 and alternate years.) *Winter quarter.* Mr. Trimble.

125. STRUCTURAL FRAMEWORKS (5). Prerequisites, Mathematics 121, 123.
Analyses of continuous beams and frames of constant and variable moment of inertia by fixation factors and moment distribution; also a critical study of retaining walls, dams, and tanks.
*Winter quarter.* Mr. Hickerson.

127. TRANSPORTATION FACILITIES (3).
Highway surveying and planning, traffic and parking studies; also route surveys and design applied to airports, railroads, and rapid transit.
*Winter quarter.* Mr. Hickerson.

131. THEORY OF EQUATIONS (5). Prerequisite, Mathematics 33 or equivalent.
Properties of polynomials in a field, equations in the rational and real number fields, elimination, resultants, symmetric functions, algebraic field extensions, and ruler and compass constructions.
*Winter quarter.* Mr. Cameron.

136. INTRODUCTION TO MODERN ALGEBRA (5). Prerequisite, Mathematics 33 or equivalent.
Introduction to integral domains, fields, groups, vector spaces, theory of linear dependence, systems of linear equations, linear transformations, and matrices.
*Spring quarter.* Mr. Cameron.

141. DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 33 or equivalent.
This course is designed for students specializing in mathematics and the sciences. It treats ordinary differential equations with applications in mechanics, geometry, and physics.
*Fall and spring quarters.* Messrs. Linker, Hoyle.

147. INTRODUCTION TO THE THEORY OF DETERMINANTS AND MATRICES (5). Prerequisite, Mathematics 33 or equivalent.
A study of the basic concepts and theorems concerning determinants and matrices; designed principally for students of statistics but open also to other students of mathematics.
*Fall quarter.* Mr. Browne.

150. SYNTHETIC PROJECTIVE GEOMETRY (3). Prerequisite, Mathematics 33 or equivalent.
A study of forms of the first and second orders by synthetic methods. Projective correspondences, poles and polars, metric specializations.
*Summer session.* Mr. Lasley.

151. ANALYTIC PROJECTIVE GEOMETRY I (5). Prerequisite, Mathematics 33 or equivalent.
Projective geometry of one-dimensional forms, treated analytically, with special emphasis on applications to theory of equations.
*Winter quarter.* Mr. Lasley.

152. ANALYTIC PROJECTIVE GEOMETRY II (5). Prerequisite, Mathematics 151.

Projective geometry of two-dimensional forms, treated analytically, with special emphasis on the theory of conics.

*Winter quarter.* Mr. Lasley.

161. ANALYTIC GEOMETRY OF SPACE (5). Prerequisite, Mathematics 33.

A study from the analytic point of view of loci in three dimensions, with special emphasis on systems of planes and on quadric surfaces.

*Spring quarter.* Mr. Lasley.

166. THEORY OF FUNCTIONS OF REAL VARIABLES I (5). Prerequisite, Mathematics 171.

The real number system; point sets, theory of measure; correspondences and transformations.

*Spring quarter.* Mr. Whyburn.

171. ADVANCED CALCULUS I (5). Prerequisite, Mathematics 33 or equivalent. Mathematics 36 and 141 are recommended.

Limits, continuity, infinitesimals, differentials, power series, partial and implicit differentiation, definite and line integrals.

*Fall quarter.* Mr. Hobbs.

172. ADVANCED CALCULUS II (5). Prerequisite, Mathematics 171.

Gamma and Beta Functions; Legendre Polynomials; Bessel Functions; Fourier Series; Laplace's Equation; Harmonic Functions; Potential.

*Winter quarter.* Mr. Hobbs.

173. TOPICS IN APPLIED MATHEMATICS (5).

A study of special methods useful in the solution of boundary value problems associated with second order partial differential equations—Orthonormal expansions, Laplace transform, conformal mapping, perturbation methods, methods of characteristics, etc.

*Spring quarter.* Mr. Mann.

176. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE I (3). Prerequisite, Mathematics 36 or equivalent. Mathematics 171 is recommended.

Differentiation and integration of a function of a complex variable, line integrals, mapping of elementary functions, linear fractional transformations.

*Fall quarter.* Mr. Hershner.

181. ELEMENTARY THEORY OF NUMBERS (5).

An elementary course in theory of rational integers, divisibility, scales, simplest properties of prime numbers, Diophantine equations, congruences, quadratic residues. Applications in elementary mathematics and mathematical games.

*Fall quarter.* Mr. Brauer.

191. VECTOR AND TENSOR ANALYSIS (5). Prerequisites, Mathematics 141 and 161 or equivalent.

Vector and tensor algebra applied to geometry and physics. Students taking this course should be familiar with ordinary differential equations and should have some knowledge of analytic geometry of three dimensions.

*Fall quarter.* Mr. Hoyle.

193. PARTIAL DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 141.

A study of some of the partial differential equations of physics and boundary problems.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Hobbs.

## Courses for Graduates

207. ADVANCED THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (5). Prerequisite, Mathematics 176.

Topics cover types of series convergence; properties of analytic functions; calculus of residues; integral functions; conformal representation, and elliptic functions.

*Winter quarter.* Mr. Hershner.

208. CONFORMAL MAPPING (5). Prerequisite, Mathematics 207.

This course treats the modern aspects of the theory of conformal mapping.

(1949-1950 and alternate years.) *Spring quarter.* Mr. Hershner.

226. FOUNDATIONS OF GEOMETRY (5).

A study of rigorous logic in geometry: postulates, systems of geometry, etc. Contributions of Pasch, Peano, Hilbert, Veblen, and the postulational school.

*Summer session.* Mr. Whyburn.

230. ADVANCED NUMBER THEORY OF RATIONAL INTEGERS I (5). Prerequisite, Mathematics 181.

Recent results in elementary number theory. Arithmetic theory of binary quadratic forms.

(1949-1950 and alternate years.) *Winter quarter.* Mr. Brauer.

231. ADVANCED NUMBER THEORY OF RATIONAL INTEGERS II (5). Prerequisite, Mathematics 181.

Selected problems of additive number theory and the geometry of numbers. Introduction to the analytic theory of numbers.

(1949-1950 and alternate years.) *Spring quarter.* Mr. Brauer.

232. ALGEBRAIC THEORY OF NUMBERS I (5). Prerequisites, Mathematics 131 and 181.

Existence of transcendental numbers, transcendence of e and $\pi$; number theory in Euclidean fields, biquadratic and cubic residues; general algebraic fields; theory of ideals.

(1950-1951 and alternate years.) *Winter quarter.* Mr. Brauer.

233. ALGEBRAIC THEORY OF NUMBERS II (5). Prerequisite, Mathematics 232.

Continuation of 232. Discriminants of algebraic fields, unities, quadratic, cubic, and cyclotomic fields; Diophantine equations of higher degree, Fermatt's Last Theorem.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Brauer.

236. HIGHER PLANE CURVES (5). Prerequisite, Mathematics 151.

Applications of projective geometry to curves of degree higher than two; special types of curves; relationships; properties.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Lasley.

241. LIE'S THEORY OF DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 141.

An introduction to continuous groups and to the theory of differential equations.

(1949-1950 and alternate years.) *Spring quarter.* Mr. Hobbs.

246. MODERN HIGHER ALGEBRA (5). Prerequisite, Mathematics 131.

A course dealing with certain fundamental aspects of modern algebra, including the topics of groups, rings, and fields.

*Spring quarter.* Mr. Browne.

247. THE THEORY OF MATRICES (5). Prerequisite, Mathematics 147.
A course designed to give the student a thorough grounding in some of the recent and most important results in the study of algebraic matrices.
*Winter quarter.* Mr. Browne.

256. ALGEBRAIC INVARIANTS (5). Prerequisites, Mathematics 131 and 152.
An introduction to the non-symbolic theory of invariants of binary forms with applications to geometry, followed by an explanation of the symbolic notation of Clebsch with practice in its use. Based on Dickson's Algebraic Invariants.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Browne.

261. DIFFERENTIAL GEOMETRY (5). Prerequisites, Mathematics 141 and 161.
A study of the metric differential properties of curves, surfaces, and curves on surfaces by means of differential equations.
(1949-1950 and alternate years.) *Fall quarter.* Mr. Lasley.

267. THEORY OF FUNCTIONS OF REAL VARIABLES II (5). Prerequisite, Mathematics 166.
Functions, continuity, measurability, Riemann and Lebesgue integration, Baire classes.
*Fall quarter.* Mr. Whyburn.

268. ADVANCED DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 267 or equivalent.
Fundamental existence theorems for ordinary equations, boundary value problems, applications to classical problems of mathematical physics.
*Winter quarter.* Mr. Whyburn.

280. CALCULUS OF VARIATIONS (5). Prerequisites, Mathematics 141 and 171.
The determination of necessary and sufficient conditions for functions which minimize certain definite integrals.
(1949-1950 and alternate years.) *Fall quarter.* Mr. Mackie.

281. GENERAL TOPOLOGY (5).
Topological space; homeomorphism of sets; Frechet space; axioms of countability; normal classes; separable metric spaces, and complete spaces.
(1950-1951 and alternate years.) *Fall quarter.* Mr. ————————.

286. PROJECTIVE DIFFERENTIAL GEOMETRY (5). Prerequisites, Mathematics 151 and 261.
A study of the projective properties of curves and ruled surfaces by means of the invariants and covariants of systems of homogeneous differential equations.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Lasley.

291. THE THEORY OF FINITE GROUPS (5). Prerequisite, Mathematics 136 or equivalent.
A study of the general properties of abstract groups, including normal subgroups, quotient groups, homomorphisms, isomorphisms, automorphisms, composition series, etc. A special study is made of Abelian groups.
(1950-1951 and alternate years.) *Fall quarter.* Mr. Cameron.

297. GALOIS THEORY (5). Prerequisite, Mathematics 246.
A development of Galois theory by the methods of Artin, applications to solvability of equations and other problems.
(1949-1950 and alternate years.) *Fall quarter.* Mr. Cameron.

SEMINARS AND THESES (5).

351, Mr. Whyburn; 352, Mr. Hickerson; 356, Mr. Lasley; 361, Mr. Hobbs; 366, Mr. Browne; 371, Mr. Winsor; 372, Mr. Hoyle; 376, Mr. Mackie; 377, Mr. Hill; 381, Mr. Brauer; 382, Mr. Cameron; 386, Mr. Hershner; 387, Mr. Mann.

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## DEPARTMENT OF MUSIC

Professors: GLEN HAYDON, EARL SLOCUM, J. P. SCHINHAN
Associate Professor: WILLIAM S. NEWMAN
Assistant Professors: JOEL CARTER, WILTON MASON
Instructors: EDGAR ALDEN, ALLEN GARRETT, HERBERT LIVINGSTON
Assistants: DOROTHY ALDEN, HAROLD ANDREWS, DAVID BRANDT, WILLIAM COLLINS, RICHARD COX, EFRIM FRUCHTMAN, HUBERT HENDERSON, CAROLYN LIVINGSTON, ANNE LYNCH, THOMAS NICHOLS, CARL PERRY, EDITH POTTER, FRANCES SLOAN

The courses in music are designed to perform a threefold function in the University: (a) to give the student electing music as his chief interest a thorough training in the practical, theoretical, and historical aspects of the subject as a part of the general liberal arts curriculum for the A.B. degree; (b) to give the student interested in the scholarly aspects of the subject the basic training necessary for successful graduate work; (c) to afford students in other departments the opportunity to take music as an elective for its cultural value in the liberal arts program.

*Course leading to the A.B. degree with music as the major:* Students who take music as the major must modify the regular program for the first two years in order to begin music their first year. They normally will take English 1, 2, a foreign language, Music 1 and 14-15, and mathematics or Latin or Greek. Courses in the regular freshman program postponed to make way for the music must be taken at some later time. Similar arrangements must be made in the sophomore year to provide for Music 21, 44-45, and 47.

The undergraduate major in music consists of from thirty to forty quarter hours beyond the freshman-sophomore requirements and must include Music 48, 61, 64, 71, 74, and 101. Attention is called to the special requirements in applied music. See pages 296-98.

*Honors in Music:* Students interested in becoming candidates for the A.B. degree with honors in music should read the general regulations governing the honors program in the Division of Humanities and should consult the head of the Department of Music for the specific modifications of this program as applied to music.

*Course leading to the B.M. degree:* The department offers the B.M. degree to students meeting the applied music requirements in conformity with the National Association of Schools of Music. This degree is awarded in conjunction with or after the A.B. degree in a five-year program. Students must satisfy the requirements for this degree by giving such public recitals and by passing such examinations as may be specified by the department. Students interested in this degree should apply to the Department of Music for particulars.

## Courses for Undergraduates

1. NOTATION, SIGHT-SINGING, AND DICTATION (5).
*Ten laboratory hours a week, fall quarter.* Messrs. Carter, Fruchtman.

1-x. SIGHT-SINGING (2½).
*Five laboratory hours a week, any quarter.* Mr. Carter.
1-y. DICTATION (2½).
*Five laboratory hours a week, any quarter.* Mr. Carter.

14-15. HARMONY (10). Prerequisite or corequisite, Music 1.
*Five hours a week, winter and spring quarters.* Messrs. Haydon, Fruchtman.

21. NOTATION, SIGHT-SINGING, AND DICTATION (2½). Prerequisite, Music 1. Sophomore requirement for those who will have music as a major.
*Five laboratory hours a week, spring quarter.* Mr. Carter.

*41. MUSIC APPRECIATION (5).
A general introduction, through readings, demonstrations, lectures, and listening, of the principal elements, forms, characteristics, and names in music. No prerequisite. May be substituted for the fourth quarter of English in the General College.
*Any quarter. Fee, $1.00.* Mr. Newman.

44-45. ADVANCED HARMONY (10). Prerequisites, Music 1, Music 14-15. Sophomore requirement for those who will have music as a major.
*Five hours a week, fall and winter quarters.* Messrs. Schinhan, Mason.

47, 48. THE HISTORY OF MUSIC (5 each). Requirement for those who will have music as a major.
*Five hours a week, winter and spring quarters.* Mr. Mason.

*54. MUSIC APPRECIATION: INSTRUMENTAL MUSIC OF THE CLASSICAL PERIOD (5).
A survey through lectures, readings, and listening, of important solo and ensemble instrumental music, musical forms, and composers of the seventeenth and eighteenth centuries. No prerequisite.
*Fall quarter. Fee, $1.00.* Mr. Alden.

*55. MUSIC APPRECIATION: INSTRUMENTAL MUSIC OF THE ROMANTIC AND MODERN PERIODS (5).
A survey through lectures, readings, and listening, of important solo and ensemble instrumental music, musical forms, and composers of the nineteenth and twentieth centuries. No prerequisite.
*Winter quarter. Fee, $1.00.* Mr. Alden.

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*Will not be accepted as part of a major.

*56. MUSIC APPRECIATION: A SURVEY OF VOCAL MUSIC (5).
A survey through lectures, readings, and listening, of important solo and ensemble vocal music (including opera), musical forms, and composers. No prerequisite.
*Spring quarter. Fee, $1.00.* Mr. Alden.

61. MODAL COUNTERPOINT IN THE SIXTEENTH CENTURY STYLE (5). Prerequisite, Music 14-15.
Study and practice of the contrapuntal technique of the sixteenth century; the writing of simple motets.
*Spring quarter.* Messrs. Schinhan and Mason.

64. TONAL COUNTERPOINT (5). Prerequisite, Music 14-15.
Study and practice of the contrapuntal technique with particular reference to the style of Bach; writing of two- and three-part inventions.
*Fall quarter.* Mr. Slocum.

71. INSTRUMENTATION, ORCHESTRATION, AND ELEMENTARY CONDUCTING (5). Prerequisite, Music 44-45.
*Spring quarter.* Mr. Slocum.

74. ANALYSIS AND COMPOSITION IN THE SMALLER FORMS (5). Prerequisite, Music 44-45.
*Winter quarter.* Mr. Slocum.

## Courses for Graduates and Advanced Undergraduates

101. INTRODUCTION TO MUSICOLOGY (5).
A study of the problems and methods in the various fields, historical and systematic, of musical research. Prerequisite, a reading knowledge of one or more of the important foreign languages, a fair knowledge of musical theory, and some skill in practical applied music.
*Fall quarter.* Mr. Haydon.

102. INTRODUCTION TO MUSICOLOGY (3). Continuation of 101.
*To be arranged.* Mr. Haydon.

104. FOLK MUSIC (3 or 5).
A comparative study of the folk songs of various nations, with special emphasis on the American folk music of the South. Lectures, readings, and the study of music available in print or on phonograph records.
*To be arranged.* Mr. Schinhan.

†121, 122, 123. STUDIES IN THE HISTORY OF MUSIC (3 or 5). Prerequisites, Music 44-45 and 47, 48.
A critical study of certain composers, style species or style periods, such as Bach, the sonata, or the music of the sixteenth century.
*Three or five hours a week, fall, winter, and spring quarters.* Mr. Newman.

## Courses for Graduates

201. SPECIAL STUDIES.
The Department is ready to assist and advise competent graduate students who may propose plans for either research or creative work which meet with its approval.
*Hours and credit to be arranged.* Staff.

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*Will not be accepted as part of a major.
†Will be given as the demand warrants.

*204-205. INTRODUCTION TO COMPARATIVE MUSICOLOGY (6).
*Three hours a week, fall and winter quarters.* Mr. Schinhan.

214. APPLIED HARMONY (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.
*Five hours a week, fall quarter.* Mr. Schinhan.

261. ADVANCED MODAL COUNTERPOINT IN THE SIXTEENTH CENTURY STYLE (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.
*Five hours a week, fall quarter.* Mr. Mason.

264. ADVANCED TONAL COUNTERPOINT (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.
*Five hours a week, winter quarter.* Mr. Slocum.

274. ADVANCED COMPOSITION (5). Prerequisites, Music 214, 261.
*Five hours a week, winter quarter.* Mr. Schinhan.

271. ADVANCED ORCHESTRATION (5). Prerequisites, Music 214, 261, 264.
*Five hours a week, spring quarter.* Mr. Slocum.

299. THESIS (5).
*Spring quarter.* Staff.

301, 302, 303. SEMINAR: MUSICOLOGY (9-15).
*Three or five hours a week (to be arranged), fall, winter, and spring quarters.* Mr. Haydon.

## Applied Music

The following courses in applied music are open to students in any department of the University having the necessary technical equipment. The work in applied music is regarded not merely as technical training in performance, but also as a study of the standard literature for the particular instrument or ensemble group. Credit in general will be given on the basis of one quarter hour credit a year in the first and second years; two quarter hours credit a year in the third and fourth years. Credits in applied music will be reported to the Registrar, normally at the end of each academic year. Credit in the School of Education will be given on the basis of 1½ quarter hours per quarter. For those whose major is not music a total credit not to exceed ten quarter hours may be counted as electives in the A.B. curriculum. Those whose major is music must offer at least ten quarter hours in applied music and may offer a total not to exceed twenty-five quarter hours in this field, of which not more than ten may be ensemble courses. All students with majors in music, unless given special permission by the head of the department, must continue individual instruction in applied music throughout the four years. Students planning to teach instrumental music in the public schools will arrange their schedule for the study of the wind and stringed instruments in consultation with the department.

*Will be given as the demand warrants.

The general prerequisite work for entrance into the first year courses is ability to perform music of difficulty rated as grade three for the particular instrument. Copies of the course of study for each instrument will be sent upon request. Students who do not have this prerequisite will repeat the preparation course without credit until they qualify for the freshman course. The candidate for the A.B. degree with a major in music must complete as a minimum the freshman course in his chosen field of applied music. Students electing some other instrument than piano for their work in applied music must demonstrate sufficient pianistic ability to enable them to meet the practical requirements of the course to be pursued. This is interpreted to mean the ability to play at sight hymns or compositions of similar difficulty.

Students seeking the A.B. degree with a major in music will be required to participate in the musical organizations of the department and students in advanced applied music courses must take part in recitals as prescribed by the department.

## Fees

Fees for individual instruction are: $22.50 per quarter for one lesson a week; $45.00 per quarter for two lessons a week. Fee for one daily practice period (room with piano), $3.75 per quarter; fee for two hours daily practice, $6.25 per quarter. Other fees in proportion. Fee for six hours practice a week on Reuter four-manual organ, $18.75 per quarter; on Allen or Reuter practice organ, $15.00 per quarter; on Estey practice organ, $7.50 per quarter. Arrangements for applied music are made in the office of the Department of Music.

## Individual Instruction

A. PREPARATORY ORGAN (no credit).
*One or two half-hour lessons and six or twelve hours of practice a week, every quarter.* Messrs. Schinhan, Brandt.

1A. FIRST YEAR ORGAN (1 or 2). Prerequisite, ability to play music for a keyboard instrument of the difficulty of Heller, Op. 45, 46, 47; Bach, Two-Part Inventions; scales and arpeggios in moderate tempo; simple hymns (at sight).
*Value, 1 or 2 quarter hours, respectively, for one or two lessons and six or twelve hours of practice a week through three quarters.* Messrs. Schinhan, Brandt.

21A. SECOND YEAR ORGAN (1 or 2). Prerequisite, Music 1A.
*Value and hours as in 1A.* Messrs. Schinhan, Brandt.

51A. THIRD YEAR ORGAN (2 or 4). Prerequisite, Music 21A.
*Value, 2 or 4 quarter hours, respectively, for one or two lessons and six or twelve hours of practice a week through three quarters.* Messrs. Schinhan, Brandt.

81A. FOURTH YEAR ORGAN (2 or 4). Prerequisite, Music 51A.
*Value and hours as in 51A.* Messrs. Schinhan, Brandt.

91A. FIFTH YEAR ORGAN (9). Prerequisite, Music 81A. Required of candidates for the B.M. degree.
Similar numbering and description with regard to value, hours, and prerequisite work apply to each of the courses B, C, D, and E.

B. PIANO. Messrs. Schinhan, Newman, Mason, Livingston, Nichols, Howell, Mrs. Livingston, Mrs. Potter.

C. VOICE. Messrs. Carter, Collins, Cox, Perry, Miss Lynch.

D. VIOLIN OR OTHER STRINGED INSTRUMENT. Messrs. Fruchtman, Alden, Mrs. Alden, Miss Sloan.

E. FLUTE OR OTHER BAND OR ORCHESTRAL INSTRUMENT. Messrs. Haydon, Slocum, Henderson, Garrett, Andrews.

## Class Instruction

For students desiring to complete the general piano requirements, for those in the general instrumental course, and for those wishing special training in voice, class instruction will be offered as far as practicable. Applications for admission to any of these classes should be made at the office of the Department of Music as soon after registration as possible. Hours to be arranged.

## Ensemble Groups

1F. FIRST YEAR BAND (1 for year). Prerequisite, approval of instructor based upon a "try-out" given at the beginning of each quarter.
*A minimum of two hours a week through three quarters.* Mr. Slocum.

21F. SECOND YEAR BAND (1 for year).
*Hours and value as in preceding course.* Mr. Slocum.

51F. THIRD YEAR BAND (2 for year).
*A minimum of two hours a week through three quarters.* Mr. Slocum.

81F. FOURTH YEAR BAND (2 for year).
*Hours and value as in preceding course.* Mr. Slocum.
Similar numbering, prerequisite work, value, and hours apply to each of the following courses in applied music:

G. ORCHESTRA. Mr. Slocum.

H. GLEE CLUB. Mr. Carter.

I. PIANO ENSEMBLE OR OTHER INSTRUMENTAL ENSEMBLE. Staff.

## DEPARTMENT OF NAVAL SCIENCE

Professor: J. E. COOPER, *Captain, USN*
Associate Professor: W. J. MANNING, *Commander, USN*
Assistant Professors: W. F. MIMS, *Lt. Comdr., SC, USN*; J. W. AUSTIN, *Lt. Comdr., USN;* B. W. MCLEAN, *Major, USMC;* E. R. ZUMWALT, *Lieut., USN;* G. E. FRENCH, *Lieut., USNR;* R. L. J. LONG, *Lieut., USN*

### General Statement

The primary object of the course in naval science is to provide systematic instruction and training which will qualify graduates of the course for appointments as Ensigns, U. S. Navy; Second Lieutenants, U. S. Marine Corps; Ensigns, U. S. Naval Reserve; and Second Lieutenants, U. S. Marine Corps Reserve.

### Entrance Requirements

Under Public Law 729 governing the Naval Reserve Officers Training Corps and the Naval Aviation College program, individuals are selected from applicants by means of a nation-wide aptitude test, following which selection the successful applicants report to an Office of Naval Officer Procurement for physical examination and for a final interview before a State Selection Board. Application blanks for entry into either of the above programs are mailed each year to universities, colleges, and high schools throughout the United States.

Applicants for the N.R.O.T.C. program must be not less than 17 years nor more than 21 years of age on July 1 of the year in which enrollment in the Corps is desired. Applicants must satisfy the entrance requirements of the University and obtain their own admission. Entrance into the Corps is limited to the fall quarter of each year.

Students entering the program are of two classifications, regular and contract students. A *regular student* enters into a contract with the Secretary of the Navy to:

1. continue training until the completion of such training as may be prescribed, leading to a commission in the United States Navy or United States Marine Corps, if offered;

2. serve as an officer on active duty for a period of not less than fifteen months, and upon termination of such active duty to accept a commission in the United States Naval Reserve or United States Marine Corps Reserve;

3. remain unmarried until commissioned.

Regular students are required to take a training cruise or training period of six to eight weeks' duration during the summer months following their freshman, sophomore, and junior years. All expenses, including medical services, subsistence, and transportation to and from the University to the port of embarkation are paid by the Navy.

Regular students receive $600 annually, and all tuition, books, and fees are paid by the Navy for four years.

A *contract student* enters into a contract with the Secretary of the Navy, whereby he agrees to:

1. continue training in the Naval Reserve Officers Training Corps as a contract student until the completion of such training as may be prescribed, leading to a commission in the United States Naval or United States Marine Corps Reserve;

2. remain unmarried until commissioned.

Contract students are required to make only one cruise during the four years, normally between the junior and senior years.

## Curricula

*General:* In order to obtain a commission either in the U. S. Navy, U. S. Naval Reserve, U. S. Marine Corps, or U. S. Marine Corps Reserve, students are required to obtain a baccalaureate degree and complete forty-eight (48) quarter hours in the Naval Science Department. During each quarter every student is required to attend one laboratory period of two hours' duration each week. By the end of the sophomore year every student must have satisfactorily completed one year of college physics and mathematics courses through trigonometry. Every student must achieve proficiency in written and oral expression in accordance with the standards of proficiency set by the University. Three separate curricula in Naval Science subjects are offered, leading to commissions in the line of the Navy, the Supply Corps of the Navy, and the Marine Corps. All subjects in the Naval Science Department are credited by the University as divisional electives toward a degree. These curricula are outlined below:

A. LINE CURRICULA:

1. First year:
   NS—(101)—Naval Orientation
   NS—(102)—Naval Orientation

2. Second year:
   NS—(201)—Naval Weapons
   NS—(202)—Naval Weapons

3. Third year:
   NS—(301)—Navigation
   NS—(302)—Navigation

4. Fourth year:
   NS—(401)—Naval Machinery
   NS—(402)—Naval Administration and Leadership, Damage Control

B. SUPPLY CORPS:

1. First year:
   NS—(101)—Naval Orientation
   NS—(102)—Naval Orientation

2. Second year:
   NS—(201)—Naval Weapons
   NS—(202)—Naval Weapons

3. Third year:
   NS—(301)—Navigation
   NS—(302)—Navigation

4. Fourth year:
   NS—(401S)—Naval Supply
   NS—(402S)—Naval Supply

C. MARINE CORPS:

1. First year:
   NS—(101)—Naval Orientation
   NS—(102)—Naval Orientation

2. Second year:
   NS—(201)—Naval Weapons
   NS—(202)—Naval Weapons

3. Third year:
   NS—(301)—Navigation
   NS—(302M)—Concepts of Military Policy, Power, and Principles

4. Fourth year:
   NS—(401M)—Analysis of American Battles
   NS—(402M)—Amphibious Operations

## DEPARTMENT OF PATHOLOGY

Professors: KENNETH M. BRINKHOUS, *JAMES BELL BULLITT
Assistant Professor: JOHN B. GRAHAM
Instructors: JUNE U. GUNTER, *Director of Watts Hospital Laboratories;* GEORGE D. PENICK; MARGARET SWANTON
Fellows: WALTER C. HILDERMAN, ROBERT D. LANGDELL
Research Assistant: BARBARA M. MOORE
Senior Technician: MITTIE PICKARD
Student Assistant: DAVID L. COLLINS, JR.
Secretary: WILLA H. STEVENS
Research Technician: JAMES A. STURDIVANT
Technicians: HAROLD H. HARVILLE, HELENE M. SPARKS

### Courses for Undergraduates

51. CLINICAL PATHOLOGY (6). Prerequisite, Pathology 161a.

The object of this course is to familiarize the student with routine examinations of the blood, urine, feces, gastro-intestinal contents, sputum, transudates, and exudates; to acquire accuracy in such procedures; and to secure a general understanding of their relation to the diagnosis of disease.

*One lecture and two laboratory hours, last five weeks, winter quarter; three lecture and four laboratory hours, spring quarter.* Dr. Gunter and staff.

52. CLINICAL PATHOLOGY (4). Prerequisites, general chemistry and one course in zoology.

A course designed to give undergraduate students an introduction to hematology, urinalysis, and some of the other technical procedures commonly employed in hospital and biological research laboratories.

Dr. Hilderman.

### Courses for Graduates and Advanced Undergraduates

161ab. PATHOLOGY (18). Prerequisites, anatomy, histology, physiology, biochemistry.

*Four lecture and eight and a half laboratory hours a week, fall quarter; four lecture and eight and a half laboratory hours a week, winter quarter.* Dr. Brinkhous and staff.

NOTE: Hours, credits, and instructor for the following courses to be arranged.

162 (I). SURGICAL PATHOLOGY. Prerequisite, Pathology 161.

A detailed study of surgical material, with special reference to tumors.

162 (II). EXPERIMENTAL PATHOLOGY. Prerequisites, physiology and biochemistry.

Production of various inflammatory lesions and other pathological processes (edema, hemorrhage, ischemia, jaundice, urinary obstruction, etc.), and study of their development.

162 (III). RESEARCH IN PATHOLOGY. Prerequisites, physiology and biochemistry.

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*Professor Emeritus.

## DEPARTMENT OF PHARMACOLOGY

Kenan Research Professor: WILLIAM DEBERNIERE MACNIDER
Associate Professor: FRED WILSON ELLIS
Instructor: JAMES ALEXANDER TAYLOR
Technical Assistant: LEARY T. COLIE
Part-time Student Assistant: ADOLPH JOSEPH URBAN

The Department of Pharmacology offers graduate work which leads to the degree of Master of Science with a major in pharmacology. Prospective candidates for a master's degree in pharmacology must have a thorough undergraduate training in zoology, chemistry, and physics and should have a reading knowledge of French or German. In addition to the major work in pharmacology, the candidate for a master's degree must take biological chemistry, physiology, and neuroanatomy in order to satisfy the minor requirements. A minimum of two years will be necessary in order to complete this program of study.

### Course for Undergraduates

55. PHARMACOLOGY (5). Prerequisites, Physiology 51, Materia Medica 68-69. This course is intended primarily for pharmacy students.

*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Drs. Ellis, Taylor.

### Courses for Graduates and Advanced Undergraduates

161. TOXICOLOGY (5). Prerequisites, Chemistry 31, 41, 42, 61, 62, 63, and Biological Chemistry 101-102.

This course is designed to acquaint the student with the origin, properties, and actions of the common poisons, including heavy metals and plant substances. Attention is paid to treatment and antidotes. Lecture material is supplemented by laboratory work in detection and isolation of drugs and poisons in medicines, urine, food, organs, etc.

*Two lecture and six laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, $10.00.* Drs. Ellis, MacNider, Taylor.

162. BIOSSAY (2½). Prerequisite, Pharmacology 55.

Consideration is given those substances listed in the United States Pharmacopoeia which require standardization by biologic methods.

*One lecture and three laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Drs. Ellis, Taylor.

## Courses for Graduates

171abc. PHARMACOLOGY (II). Prerequisites, Biological Chemistry 101, 102, Physiology 141, 142, Neuroanatomy 101.

The lectures and laboratory cover the more important drugs with predominant systematic actions and include the fundamental bases and mechanisms of clinical actions, uses, doses, diagnosis and treatment of poisoning, and biological and clinical correlations.

*Three lecture and three laboratory hours a week, fall quarter; four lecture and three laboratory hours a week, winter quarter; one lecture hour a week, spring quarter. Laboratory fee for non-medical students, $15.00 a quarter.* Drs. Ellis, Taylor.

172. ADVANCED PHARMACOLOGY. Prerequisite, Pharmacology 171abc.

This course is open to those with satisfactory qualifications and is designed to offer special training in technical procedures commonly employed in pharmacological investigations.

*Hours by arrangement.* Drs. Ellis, Taylor.

201. CHEMOTHERAPY (3). Prerequisite, Pharmacology 171abc.

This course presents a systematic pharmacologic study of chemotherapeutic agents, such as sulfonamides, antibiotics, etc. Effective drugs are considered from a chemical viewpoint and a correlation drawn between structure and therapeutic efficiency.

*Three lectures a week, spring quarter.* Drs. Ellis, Taylor.

301, 302, 303. RESEARCH IN PHARMACOLOGY (5 each).

*Equivalent of five hours a week, throughout the year. Laboratory fee, $10.00 each quarter.* Drs. Ellis, MacNider, Taylor.

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# DEPARTMENT OF PHILOSOPHY

Professors: S. A. EMERY, L. O. KATTSOFF, *Chairman*
Assistant Professors: E. M. ADAMS, C. P. CAVARNOS, *M. E. LEAN
Visiting Lecturer: C. J. SULLIVAN, JR.
Part-time Instructors: W. H. POTEAT, W. L. SIEMON

The Department of Philosophy is a member of each division. Accordingly, an undergraduate student planning a major in philosophy will elect this department as in one of these divisions and will be governed by the rules of that division regarding the distribution of his work among departmental, divisional, and non-divisional courses.

No fixed group of courses in philosophy is required for an undergraduate major. Each student will decide his junior and senior program of courses in consultation with two advisers (one chosen by him, one appointed by the department). It is suggested that students looking toward a major in philosophy avail themselves of the introductory courses covering both systematic philosophy (21, 22, 41) and the history of philosophy (42, 56, 57, 58).

*Absent on leave, 1949-1950.

## Courses for Undergraduates

21. INTRODUCTORY LOGIC (5).
Fundamentals of sound thinking and argument. Valid forms of deductive reasoning; induction and scientific method. Clarity in language. Practice in logical analysis and detection of fallacies.
*Each quarter.* Staff.

22. INTRODUCTORY ETHICS (5).
An examination of the ethical systems of Western Civilization and their relevance for determining values for personal conduct in areas of contemporary life.
*Each quarter.* Staff.

41. THE FIELDS OF PHILOSOPHY: A SYSTEMATIC INTRODUCTION (5).
A survey of the chief philosophic fields, their interrelations and typical problems, as a basis for further courses and for independent reading.
*Each quarter.* Staff.

42. THE DEVELOPMENT OF PHILOSOPHY: AN HISTORICAL INTRODUCTION (5).
An introduction to philosophy through an historical survey of Western thought. Emphasis on the leading figures and on theories of epistemology, ethics, and metaphysics.
*Each quarter.* Staff.

56. THE DEVELOPMENT OF ANCIENT PHILOSOPHY (5).
The growth of philosophic thought from the dawn of Greek philosophy to the beginning of the Christian era. Special attention to Plato and Aristotle.
*Fall quarter.* Mr. Cavarnos.

58. THE DEVELOPMENT OF MODERN PHILOSOPHY (5).
The growth of philosophic thought from the end of the Middle Ages through the nineteenth century. Chief emphasis on the seventeenth and eighteenth centuries.
*Winter quarter.* Mr. Adams.

63. CONTEMPORARY PHILOSOPHY (5).
A study of representative recent philosophies both as outgrowths of important movements in the history of philosophy and as interpretations of twentieth century culture.
*Spring quarter.* Mr. Emery.

76. AESTHETICS (5).
Classical and contemporary theories of beauty and aesthetic experience. A brief analysis of architecture, painting, poetry, and music as distinct media of expression.
*Spring quarter.* Mr. Cavarnos.

91. PHILOSOPHY OF THE STATE (5).
The interaction of modern political philosophy and the social scene. Consideration of the eighteenth and nineteenth century origins of contemporary ideologies of communism, fascism, socialism, and democracy.
*Winter quarter.* Mr. Adams.

96. PHILOSOPHY OF RELIGION (5).
Analysis of elements of religious thought and practice with reference to chief philosophers from Descartes through Dewey. Problems of knowledge and faith; the existence and nature of God.
*Fall quarter.* Mr. Poteat.

100a, 100b, 100c. COURSES FOR HONORS (5 each).
See the programs for Honors Work in the various divisions.

## Courses for Graduates and Advanced Undergraduates

121. KANT (5). Prerequisite, Philosophy 58 or special permission.

A study of Kant's critical philosophy as rooted in eighteenth century rationalism and empiricism and as initiating German idealism. Lectures, readings, and discussion.

*Fall quarter.* Mr. Emery.

122. PLATO AND ARISTOTLE (5). Prerequisite, Philosophy 56 or special permission.

A study of the ethical and aesthetic theories of Plato and Aristotle and the foundations of these in their philosophy of man and the universe.

*Winter quarter.* Mr. Cavarnos.

123. CONTINENTAL RATIONALISM (5). Prerequisite, Philosophy 58 or special permission.

The metaphysical systems of Descartes, Spinoza, and Leibniz as seventeenth century attempts to reconcile the mediaeval tradition and the early developments of modern natural science.

*Winter quarter.* Mr. Emery.

124. PHILOSOPHY OF THE NINETEENTH CENTURY (5). Prerequisite, Philosophy 58 or special permission.

German idealism, materialism, and voluntarism; French positivism and its opponents; English empiricism and its idealistic critics. Mutual influences and bearings on the twentieth century.

(Not offered in 1950-1951.) *Fall quarter.*

125. BRITISH EMPIRICISM (5). Prerequisite, Philosophy 42 or 58 or special permission.

An epistemological study of Locke, Berkeley, and Hume in relation to the preceding continental rationalism and the subsequent Kantian synthesis.

*Spring quarter.* Mr. Lean.

126. CONTEMPORARY AMERICAN PHILOSOPHY (5). Prerequisite, Philosophy 22 or 41 or 58 or special permission.

A survey course of American thought from John Dewey to the present in terms of the major fields: philosophy of science, metaphysics, ethics, etc.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Kattsoff.

127. AUGUSTINE AND AQUINAS (5). Prerequisite, Philosophy 56 or 122 or special permission.

A study of the philosophy of Augustine and Aquinas: their theories of God, Nature, Man, and the State; their significance for modern man.

(1951-1952 and alternate years.) *Fall quarter.* Mr. Cavarnos.

128. PROBLEMS IN CONTEMPORARY PHILOSOPHY (5).

Careful discussion of a few selected topics especially important in current philosophical literature (e.g. meaning, verification, valuation, etc.).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Emery.

131. HEGEL (5). Prerequisite, Philosophy 58 or special permission.

Hegel's Absolute Idealism: Its roots in Kant's critical philosophy and its influence on nineteenth and twentieth century thought in Europe and America.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Emery.

134. INTRODUCTION TO SYMBOLIC LOGIC (5).
The new symbolic approach to the logic of classes, propositions, propositional functions, and the nature of implication.
*Fall quarter.* Mr. Lean.

141. PHILOSOPHY OF MATHEMATICS (5). Prerequisite, a fair degree of mathematical maturity.
Basically a course in foundations of mathematics. An attempt is made to infer some of the implications for the nature of reality from the general structure of mathematics.
(1951-1952 and alternate years.) *Winter quarter.* Mr. Kattsoff.

142. FOUNDATIONS OF THE SOCIAL SCIENCES (5). Prerequisites, two courses in philosophy, psychology, or sociology.
An attempt to establish an approach to the social sciences based on the notion of purposive behavior. The course seeks to construct a theoretical framework for modern social science and a possible science of man.
*Spring quarter.* Mr. Kattsoff.

143. BASIC CONCEPTS OF THE NATURAL SCIENCES (5).
Reason and nature. Scientific method. The concepts of physics, biology, and psychology. The implications of contemporary science for the nature of reality, religion, and man.
*Fall quarter.* Mr. Kattsoff.

182. PHILOSOPHY OF SOCIAL ETHICS (5). Prerequisites, two courses in philosophy, psychology, or sociology, or special permission.
A critical study of the possibility of objective ethical criticism of social institutions, movements, and conditions as a basis for scientific social planning.
*Fall quarter.* Mr. Adams.

235. ADVANCED TOPICS IN LOGIC (5). Prerequisites, Philosophy 21 and 134.
Special topics in both modern and classical logic. Such topics as the logic of modality, the logic of probability, the nature of inference, etc., will be considered.
(1950-1951 and alternate years.) *Winter quarter.* Mr. Kattsoff.

301. SEMINAR IN METAPHYSICS (5).
*Fall quarter.* Mr. Cavarnos. (1950-1951 and alternate years.) Mr. Kattsoff. (1951-1952 and alternate years.)

302. SEMINAR IN EPISTEMOLOGY (5).
*Winter quarter.* Mr. Lean.

303. SEMINAR IN PHILOSOPHY OF VALUES (5).
*Spring quarter.* Mr. Adams.

304, 305, 306. SEMINARS IN THE HISTORY OF PHILOSOPHY (5 each).
Topics will be decided in personal conference.
*Each quarter.* Staff.

311. SPECIAL READINGS (5).
*Each quarter.* Staff.

## DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS

Director: R. A. FETZER

Professor: O. K. CORNWELL

Associate Professors: R. E. JAMERSON, G. E. SHEPARD, MRS. RUTH WHITE FINK, H. C. HOUSE, JR., CLYDE E. MULLIS, WILLIAM H. PEACOCK

Assistant Professors: E. M. ALLEN, W. W. RABB, MRS. FRANCES BURNS HOGAN, RUTH PRICE

Instructors: BUNN HEARN, J. F. KENFIELD, P. H. QUINLAN, M. D. RANSON, R. A. WHITE, M. Z. RONMAN, J. R. MURPHY, J. P. GILL, C. C. LITTLE, C. P. ERICKSON, G. J. RADMAN, L. RALPH CASEY, TOM SCOTT, MARY FRANCIS KELLAM, JOSEPH HILTON, JAMES CAMP, HAMMOND STRAYHORN, CARL BLYTH

Graduate Assistants: HARRY ADAMS, W. H. DAVIS, R. V. COX, KATHERINE DURHAM, W. A. FLAMISH, J. K. GREENBAUM, D. C. HARTIG, W. L. JEFFORDS, RICHARD D. MAXWELL, MARY MCCORMIC, W. T. MEADE, R. M. MITTEN, F. W. NELSON, SALLY SOUTHERLAND, SIDNEY VARNEY, JOYCE NORTON

The purpose of the work can be stated as follows: (1) to examine thoroughly each student and provide him with essential information concerning his health status; (2) to teach him the elements of personal hygiene and public health; (3) to give special attention by way of corrective exercises to all students with physical handicaps; (4) to teach outdoor sports and leisure time recreations to all students in line with their capacities and interests; (5) to provide the necessary training for teachers in the field of health and physical education and thus help to meet the need in North Carolina for knowledge about individual and public health and to promote widespread participation in wholesome recreation.

Students who choose a major in health and physical education will take the following courses: Physical Education 75, 76, 77, 78, 79, 86, 87. In addition men will take Physical Education 65, 66, 67, 68, 69, 70; women will take Physical Education 54, 55, 56, 57, 58, 59. For teacher certification both men and women will take Education 41, 71, 99, 63, 64. Those who choose a minor will select twenty hours of work from Physical Education 77, 78, 86, Education 63, and electives from Physical Education 65, 66, 67, 68, 69, and 70 for men, and Physical Education 54, 55, 56, 57, 58, and 59 for women.

## Courses for Undergraduates

HYGIENE 11. PERSONAL HYGIENE (3). Required of freshmen.
*Three hours a week, fall, winter, or spring quarter.* Staff.

HYGIENE 11W. PERSONAL HYGIENE (3). Required of freshmen women.
*Three hours a week, fall or winter quarter.* Mrs. Hogan.

HYGIENE 12W. HYGIENE (3). For women.
*Three hours a week, fall, winter, or spring quarter.* Miss McCormic.

1, 2, 3. PHYSICAL EDUCATION (1 each). Required of freshmen men.
*Three hours a week, fall, winter, and spring quarters.* Staff.

4, 5, 6. PHYSICAL EDUCATION (1 each). Required of sophomore men.
*Three hours a week, fall, winter, and spring quarters.* Staff.

11W, 12W, 13W. PHYSICAL EDUCATION (1 each). Required of freshmen women.
*Two hours a week, fall, winter, and spring quarters.* Staff.

21W, 22W, 23W. PHYSICAL EDUCATION (1 each). Required of sophomore women.
*Two hours a week, fall, winter, and spring quarters.* Staff.

31W, 32W, 33W. PHYSICAL EDUCATION (1 each). Required of junior women.
*Two hours a week, fall, winter, and spring quarters.* Staff.

### *For Women Who Are Majoring in Physical Education:*

54. PHYSICAL EDUCATION (2).
This course includes the fundamental skills, techniques, and teaching methods in field hockey, soccer, speedball, field ball, and volleyball. Opportunity is given for students to take National Officials' Rating examinations.
*Six hours a week, fall quarter.* Miss Kellam, Mrs. Fink, Mrs. Hogan.

55. PHYSICAL EDUCATION (3).
This course presents methods and materials in the teaching of basketball, stunts and tumbling, and conditioning exercises. Opportunity is given for students to take the National Officials' Rating Test in basketball.
*Nine hours a week, winter quarter.* Mrs. Fink, Miss Kellam, Mrs. Hogan.

56. PHYSICAL EDUCATION (3).
This course includes the methods and materials in the conduct of camping, including experience in the planning and execution of camping and other outing trips.
*Nine hours a week, spring quarter.* Mrs. Hogan.

57. PHYSICAL EDUCATION (3).
This course presents the fundamental skills and teaching methods in archery, swimming, tennis, and recreational games. Opportunity is given for students to take National Officials' Rating examinations in tennis.
*Nine hours a week, fall quarter.* Miss Kellam, Mrs. Fink, Mrs. Hogan.

58. PHYSICAL EDUCATION (2).
This course includes the methods and materials in the teaching of folk, square, social, and modern dance.
*Six hours a week, winter quarter.* Miss Price.

59. PHYSICAL EDUCATION (3).
This course presents the fundamental skills and teaching methods in badminton, golf, lifesaving, softball, and track and field activities. Opportunity is given for students to take National Officials' Rating examinations.
*Nine hours a week, spring quarter.* Miss Kellam, Mrs. Hogan.

## *For Men Who Are Majoring in Physical Education:*

65. PHYSICAL EDUCATION (3).
This course includes theory, technics, and skills in the coaching of basketball and tennis.
*Nine hours a week, fall and spring quarters.* Messrs. Scott, Kenfield.

66. PHYSICAL EDUCATION (3).
This course includes technics and skills in the coaching of football; technics and skills in teaching handball.
*Nine hours a week, winter and spring quarters.* Messrs. House, Shepard.

67. PHYSICAL EDUCATION (3).
Methods, materials, and practice in tumbling, boxing, and wrestling for prospective teachers in public schools and colleges.
*Nine hours a week, fall and winter quarters.* Messrs. Rabb, Ronman, Peacock.

68. PHYSICAL EDUCATION (3).
This course includes theory, technics, and skills in the coaching of baseball and track.
*Nine hours a week, fall and spring quarters.* Messrs. Rabb, Ranson, Hilton.

69. PHYSICAL EDUCATION (2).
Methods, materials, and practice in rhythmics and recreational games for teachers in public schools and colleges.
*Six hours a week, fall and winter quarters.* Mr. Rabb, Miss Price.

70. PHYSICAL EDUCATION (2).
Methods, materials, and practice in swimming, speedball, soccer, volleyball.
*Six hours a week, winter and spring quarters.* Messrs. Allen, Jamerson, Casey.

## *For All Undergraduate Majors in Physical Education:*

75. ANATOMY (5).
This course is designed to teach the fundamentals of anatomy as they apply functionally to the area of health and physical education.
*Fall and winter quarters.* Mr. Jensen.

76. PHYSIOLOGY (5). Prerequisite, Physical Education 75 or the equivalent of Zoology 41, 42.
A lecture course in elementary physiology covering the various systems of the body.
*Winter and spring quarters.* Mr. Miller.

77. PRINCIPLES OF PHYSICAL EDUCATION (3).
A study of the relationship and contribution of physical education to general education; historical backgrounds, basic biological, physiological, psychological, and sociological backgrounds of the modern program.
*Three hours a week, winter and spring quarters.* Messrs. Shepard, House.

78. PERSONAL AND COMMUNITY HYGIENE (5).
The purpose of this course is to give the student an understanding of the principles and problems of personal, school, and community health as they apply to everyday living.
*Fall and spring quarters.* Mr. Mullis.

79. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION (3).
This course is designed to acquaint students with tests and measurements in the fields of health and physical education, test construction, scoring and methods of using results.
*Three hours a week, fall and spring quarters.* Messrs. House, Jamerson.

83a. PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL (3).
This course deals with the selection of material and methods of physical education in the elementary school. Required of women majoring in physical education and of elementary education majors.
*Three hours a week, fall and spring quarters.* Miss Southerland.

86. ORGANIZATION AND ADMINISTRATION OF HEALTH AND PHYSICAL EDUCATION (5).
This course deals with the policies and problems of organization and administration of health and physical education programs in schools.
*Fall and winter quarters.* Mrs. Fink, Messrs. Jamerson, House.

87. INDIVIDUAL PHYSICAL EDUCATION (3).
This course is a study of problems relating to body mechanics, the needs of the physically handicapped student, and the prevention and treatment of athletic injuries.
*Three hours a week, winter and spring quarters.* Mr. Rabb, Mrs. Fink.

## Courses for Graduates and Advanced Undergraduates

120. PRINCIPLES OF PHYSICAL EDUCATION (3). Prerequisite, undergraduate work in education and psychology.
*Three hours a week, fall quarter.* Mr. Shepard.

121ab. ADMINISTRATION OF PHYSICAL EDUCATION (5).
*Fall quarter.* Messrs. Shepard, Jamerson, Mrs. Fink.

123. PERSONAL HYGIENE (3). Prerequisite, basic courses in science.
*Three hours a week, winter quarter.* Mr. Jamerson.

126ab. INDIVIDUAL PHYSICAL EDUCATION (5). Prerequisite, anatomy and physiology, or equivalent.
*Spring quarter.* Mr. Jamerson, Mrs. Fink.

127. INTRAMURAL AND EXTRAMURAL ACTIVITIES FOR SCHOOLS AND COLLEGES (3).
*Three hours a week, fall quarter.* Mr. Jamerson.

173. COMMUNITY RECREATION (Sociology 173) (5). Mr. Meyer.

175. EXTRACURRICULAR ACTIVITIES (Education 175) (5). Mr. Plemmons.

## Courses for Graduates

220. TESTS AND MEASUREMENTS IN HEALTH AND PHYSICAL EDUCATION (3).
*Three hours a week, spring quarter.* Messrs. Cornwell, Peacock.

221. PHYSIOLOGY OF EXERCISE (5). Prerequisites, zoology, anatomy, and physiology.
*Three lecture and four laboratory periods a week, winter quarter. Laboratory fee, $5.00.* Mr. Miller.

222. PRINCIPLES OF HEALTH EDUCATION (3). Prerequisite, adequate background in science.
*Three hours a week, spring quarter.*

224. SCHOOL AND COMMUNITY HYGIENE (3). Prerequisite, adequate background in science.
*Three hours a week, spring quarter.* Mrs. Fink.

225. MODERN PROBLEMS IN PHYSICAL EDUCATION (3). Prerequisites, experience and advanced work in physical education and education.
*Three hours a week, winter quarter.* Messrs. Cornwell, Peacock.

320. RESEARCH IN PHYSICAL EDUCATION (5). Prerequisites, experience and advanced work in the field.
*Winter quarter.* Messrs. Cornwell, Peacock, Mrs. Fink.

341abc. SEMINAR COURSE (3 each). Prerequisites, adequate training and experience, and consent of the instructor.
*Three hours a week, fall, winter, or spring quarter.* Messrs. Cornwell, Jamerson, Shepard, Peacock.

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## DEPARTMENT OF PHYSICS

Professors: OTTO STUHLMAN, JR., KARL H. FUSSLER, NATHAN ROSEN, PAUL E. SHEARIN, *Chairman*
Associate Professors: JOSEPH W. STRALEY, WAYNE A. BOWERS, A. VICTOR MASKET
Assistant Professor: EVERETT E. PALMATIER
Lecturer: ANTONIAS ANTONAKOS
Part-time Instructors: ROBERT J. BLACKWELL, MARJORIE P. BRYANT, WILLIAM D. BULLOCH, MORITA CRYMES, LANDON C. HECK, EMILY W. JONES, FRANK E. KINARD, GRUVER C. MARTIN, ROSS SCROGGS, WILLIARD M. SESSLER, MELVIN STEINBERG, LOUIS THACKER
Teaching Fellow: ARTHUR LINZ
Technician: NESTORE DICOSTANZO
Apparatus Custodian: WALTER D. HARRELL

### Requirements for Bachelor of Science in Physics

GENERAL COLLEGE

English 1, 2, 3, 4 (See p. 130)
German or French (See p. 150)
Mathematics 7, 8; 31, 32, 33 (or 31, 34-35-36)
Social Science 1-2
Physics 34, 35 (or 24-25), 54 or 52
Physical Education 1, 2, 3, 4, 5, 6
Hygiene 11

JUNIOR YEAR

Chemistry 1-2, 31 (Chem. 3 may be substituted for 31)
Mathematics 141
Physics 52 or 54, 53, 56, 61, 62

SENIOR YEAR

*English 59
Three courses from group A
A. Physics 91, 92, 99, 101, 102, 103, 120, 141, 150, 158, 160, 161, 162, 163
Two courses from Group B
B. Mathematics 110, 111, 131, 147, 171, 172, 176, 191, 193
Chemistry 31, 41, 42, 61, 62, 181, 182, 183
Three non-divisional electives

Requirements for graduation, at least 188 quarter hours.

## Courses for Undergraduates

20. TWENTIETH-CENTURY PHYSICS (6). No prerequisite.

An introductory course dealing with modern developments in physics. Includes such topics as X-rays, structure of atoms and molecules, the neutron, radioactivity, the atomic bomb, and cosmic rays.

*Five lecture and two laboratory hours a week, any quarter. Laboratory fee, $4.00.* Staff.

24-25. GENERAL PHYSICS (12). Prerequisite or corequisite, Mathematics 7 or equivalent.

NOTE: Both parts must be completed in order to receive any credit.

*Five lecture and two laboratory hours a week, any quarter. Laboratory fee, $4.00.* Staff.

34-35. GENERAL PHYSICS (12). Prerequisites, Mathematics 7, 8.

Similar to Physics 24-25 but at a more advanced level. Recommended primarily for physics majors and others who plan to take advanced courses in physics.

*Five lecture and two laboratory hours a week, any quarter. Laboratory fee, $4.00 a quarter.* Staff.

45. PHOTOGRAPHY (5).

*Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Messrs. Scroggs, Antonakos.

51. X-RAY TECHNIQUE: BIOPHYSICS (5). Prerequisite, one year of general college physics.

Radiographic theory and technique, primarily for premedical students, predental students, and medical technologists. May be used as a third or fourth year elective for S.B. in Medical Technology.

*Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $15.00.* Mr. Stuhlman.

52. MECHANICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, integral calculus.

*Four lecture and three laboratory hours a week, fall and spring quarters. Laboratory fee, $3.00.* Mr. Fussler.

53. OPTICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, integral calculus.

*Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, $3.00.* Mr. Stuhlman.

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*A non-divisional elective may be substituted if permission be granted by the physics department.

54. MODERN DEVELOPMENTS IN PHYSICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, differential calculus.
*Fall and spring quarters.* Mr. Shearin.

56. HEAT (5). Prerequisites, Physics 35 or 25 with permission of instructor, and integral calculus.
*Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Straley.

57. BIOPHYSICS (5). Prerequisite, Physics 25 or 35. For biophysicists, premedical or predental students, and medical technologists.
*Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Mr. Stuhlman.

61. ELECTRICITY AND MAGNETISM (5). Prerequisite, Physics 35 or 25 with permission of the instructor; integral calculus is a prerequisite or corequisite.
*Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, $3.00.* Mr. Palmatier.

62. ALTERNATING CURRENT CIRCUITS (5). Prerequisite, Physics 61.
*Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Masket.

91, 92. RESEARCH FOR SENIORS (3 each).
*Laboratory fee, $5.00 each quarter.* Staff.

99. INTRODUCTORY MATHEMATICAL PHYSICS (5). Prerequisites, Physics 52, 56, 61, 62, Mathematics 141.
This course will stress the application of mathematical techniques such as vector analysis, Fourier Series, and Green's Functions to physical problems. It is intended primarily for seniors who do not take Physics 101, 102, 103.
*Five hours a week, fall quarter.* Mr. Masket.
NOTE: Courses in Directed Teaching of High School Science and in Materials and Methods of Teaching High School Science will be found under the Department of Education.

## Courses for Graduates and Advanced Undergraduates

101, 102, 103. INTRODUCTION TO THEORETICAL PHYSICS (5 each). Prerequisites, Physics 52, 56, 62. Mathematics 141, Mathematics 171 highly desirable but may be taken concurrently.
*Five hours a week, fall, winter, and spring quarters.* Mr. Bowers.

120. HEAT AND THERMODYNAMICS (5). Prerequisite, Physics 56, or by permission.
*Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Mr. Straley.

141. ELECTRICITY AND MAGNETISM (5). Prerequisites, Physics 52 and 62, Mathematics 141.
*Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, $3.00.* Mr. Masket.

150. PHYSICAL OPTICS (5). Prerequisites, Physics 53, Mathematics 141.
(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Shearin or Mr. Bowers.

158. SOUND (5). Prerequisites, Physics 52 and Mathematics 141.
(1949-1950 and alternate years.) *Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Shearin.

160. ELECTRONICS AND ATOMIC PHYSICS (5). Prerequisites, calculus and one of the following: Physics 52, 53, 56, 61.
(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Stuhlman.

161. NUCLEAR PHYSICS (5). Prerequisites, Physics 54, and one of the following: Physics 52, 53, 56, 61; Mathematics 141.
*Five hours a week, fall quarter.* Mr. Shearin.

162. ATOMIC SPECTROSCOPY (5). Prerequisite, Physics 54.
*Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Straley.

163. MOLECULAR SPECTROSCOPY (5). Prerequisite, one of the following: Physics 53, 54, 56.
(1949-1950 and alternate years.) *Five hours a week, winter quarter.* Mr. Straley.

## Courses for Graduates

201. BOUNDARY PROBLEMS IN CLASSICAL PHYSICS (5). Prerequisites, Mathematics 141, 172, Physics 103; Mathematics 193 is desirable.
(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Rosen.

210. ELASTICITY AND HYDRODYNAMICS (6). Prerequisites, Mathematics 141, Physics 103.
*Summer session only.* Mr. Rosen.

220. KINETIC THEORY (5). Prerequisites, Mathematics 141, Physics 120, except by permission.
(1950-1951 and alternate years.) *Five hours a week, fall quarter.* Mr. Bowers.

221. STATISTICAL MECHANICS (5). Prerequisites, Mathematics 141, Physics 120, 220, except by permission.
(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Bowers.

222. THERMODYNAMICS (5). Prerequisites, Mathematics 141, Physics 120, except by permission.
(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Bowers.

240. ADVANCED ELECTROMAGNETIC THEORY (5). Prerequisites, Physics 103 or 141 and Mathematics 141.
(1949-1950 and alternate years.) *Five hours a week, fall quarter.* Mr. Rosen.

260, 261, 262. QUANTUM MECHANICS (5 each). Prerequisites, Physics 103 and 162. Mathematics 193 is desirable.
*Five hours a week, fall, winter, and spring quarters.* Mr. Rosen.

264. SPECTROSCOPY OF THE INFRA-RED (5). Prerequisites, Physics 53 and 260.
(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Straley.

267. CURRENT ADVANCES IN PHYSICS (5). Prerequisite, permission of the instructor.
*Five hours a week, fall, winter, or spring quarter.* Any of the graduate professorial staff.

268. ADVANCED THEORETICAL NUCLEAR PHYSICS (5). Prerequisites, Physics 161 and 262, except by permission.
(1950-1951 and alternate years.) *Five hours a week, fall quarter.* Mr. Rosen.

269. ADVANCED EXPERIMENTAL NUCLEAR PHYSICS (5). Prerequisites, Physics 161, 261.
(1949-1950 and alternate years.) *Five hours a week, spring quarter.* Mr. Masket.

271. THEORY OF THE SOLID AND LIQUID STATES (5). Prerequisite, Physics 260.
(1949-1950 and alternate years.) *Five hours a week, winter quarter.* Mr. Bowers.

275. THEORY OF RELATIVITY (5). Prerequisites, Mathematics 141, Physics 103.
(1949-1950 and alternate years.) *Five hours a week, spring quarter.* Mr. Rosen.

301. RESEARCH (5 or more).
*Ten or more laboratory or computation hours a week, any quarter.* Any member of the graduate professorial staff.
NOTE: Advanced instruction in dynamics is provided by Mathematics 192 (Professor Hobbs), which may be taken for credit in either mathematics or physics.

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## DEPARTMENT OF PHYSIOLOGY

Professor: J. H. FERGUSON
Associate Professors: A. T. MILLER, E. P. HIATT
Part-time Instructor: P. W. BOYLES
Technician: R. S. SPARROW

### Courses for Undergraduates

51. GENERAL COURSE IN PHYSIOLOGY (5). Prerequisites, general courses in zoology and chemistry. *Elective.
*Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Messrs. Ferguson, Hiatt, Boyles.

141. PHYSIOLOGY OF NERVOUS SYSTEM I (3). Prerequisite, consult the instructors. *Elective.
*Three lecture hours a week, winter quarter.* Messrs. Ferguson, Miller, Hiatt, and staff.

142. GENERAL COURSE IN PHYSIOLOGY II (15). Prerequisite, consult the instructors. *Elective.
*Seven lecture and sixteen laboratory hours a week, spring quarter. Laboratory fee for non-medical students, $10.00.* Messrs. Ferguson, Miller, Hiatt, and staff.

### Courses for Graduates

202. BLOOD (5). Available to selected students.
*Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, $10.00.* Mr. Ferguson.

211. EXERCISE AND STRESS PHYSIOLOGY (5). Prerequisites, Physiology 141, 142, Biological Chemistry 101 and 102.
*Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, $10.00.* Mr. Miller.

212. RENAL PHYSIOLOGY AND WATER BALANCE (5). Prerequisites, Physiology 141, 142, Biological Chemistry 101 and 102.
*Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, $10.00.* Mr. Hiatt.

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*Before registering for this work the academic student must secure the permission of his dean.

301, 302, 303. RESEARCH IN PHYSIOLOGY (5 or more).
*Hours to be arranged with instructor. Fall, winter, and spring quarters. Laboratory fee, $5.00.* Messrs. Ferguson, Miller, Hiatt, and staff.

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## DEPARTMENT OF POLITICAL SCIENCE

Professors: *C. B. ROBSON, W. W. PIERSON, †R. D. W. CONNOR, E. J. WOODHOUSE, K. C. FRAZER, P. W. WAGER, ‡W. S. JENKINS, §J. W. FESLER, CLARENCE HEER, ALBERT COATES, R. J. M. HOBBS, J. L. GODFREY, ||F. W. COKER
Associate Professors: F. G. GIL, D. G. MONROE
Visiting Lecturer: P. F. ASHBY
Acting Assistant Professor: D. F. WHITEHEAD
Instructors: T. W. AIKEN, WILLIAM BRAGAW, G. B. CLEVELAND, D. V. GUTHRIE, F. K. GIBSON, F. H. HARRIS, H. R. MARSHALL, J. I. MASON, JR., W. W. THOMAS, G. E. WOLFF
Teaching Fellow: G. R. PEACOCK

The requirements for the A.B. with a major in political science are Political Science 41, 42 or 81, and six additional courses. The department offers a general major with a distribution of courses among at least three of the several fields of political science: (1) local, state, and federal government in the United States; (2) public law and administration; (3) foreign and comparative government; (4) international law and relations; and (5) political theory and jurisprudence; and recommends supporting courses in related departments such as economics, history, psychology, and sociology. It also offers majors with supporting programs in each of the following more specialized fields: (1) public administration; (2) foreign and international affairs; and (3) Latin American affairs. There are also reading programs leading to the A.B. with Honors in Political Science in each of the fields listed above. Further details with reference to these several majors and programs of study may be obtained from the department.

### Courses for Undergraduates

41. GOVERNMENT IN THE UNITED STATES (5).
*Each quarter. Materials fee, $1.00.* Mr. Monroe, *Chairman.*

42. PROCESSES AND PROBLEMS OF GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.
*Each quarter. Materials fee, $1.00.* Mr. Harris, *Chairman.*

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*Absent on leave, fall quarter, 1949-1950.
†Deceased, February 25, 1950.
‡Absent on special service, fall and winter quarters, 1949-1950.
§Absent on leave, 1949-1950.
||Visiting Professor, winter quarter, 1949-1950.

52. THE GOVERNMENTS OF EUROPE (5). Prerequisite, Political Science 41.
The government and politics of Great Britain, France, and Russia; a survey of constitutional development, but with emphasis upon organization and methods of government.
*Winter and spring quarters. Materials fee, $1.00.* Mr. Whitehead.

81. STATE GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.
The organization and administrative methods of state government, with some examination of the relationships between the state government and the counties, cities, and towns.
*Each quarter. Materials fee, $1.00.* Messrs. Wager, Jenkins.

86. INTERNATIONAL RELATIONS AND WORLD POLITICS (5). Prerequisite, Political Science 41.
Analysis of politics among nations: imperialism, balance of power, international morality, sovereignty, diplomacy; analysis of the problem of peace: disarmament, international organizations, world government, diplomacy.
*Each quarter. Materials fee, $1.00.* Mr. Whitehead.

87. INTERNATIONAL RELATIONS OF THE LATIN AMERICAN REPUBLICS (5). Prerequisite, Political Science 41.
Historical survey of diplomatic relations of the Latin American republics with the rest of the world with special emphasis upon relations with the United States.
*Fall and spring quarters. Materials fee, $1.00.* Mr. Gil.

91-92. HONORS COURSES (10). Required of all students reading for Honors in Political Science.

## Courses for Graduates and Advanced Undergraduates

101. PUBLIC ADMINISTRATION (5). Prerequisite, Political Science 41.
A study of the basic principles of organization, location of authority, fiscal management, personnel management, and forms of administrative action in the public service.
*Fall and spring quarters. Materials fee, $1.00.* Mr. Ashby.

105. PUBLIC PERSONNEL ADMINISTRATION (5). Prerequisites, Political Science 41 and 101 or equivalent.
A study of the civil service—its recruitment, training, classification, promotion, restrictions, immunities, compensation and morale; and of the machinery which has been developed for handling personnel matters.
*Winter quarter. Materials fee, $1.00.* Mr. Ashby.

121. THE GOVERNMENT OF ENGLAND (5). Prerequisite, Political Science 41.
The development and operation of British government in its local, national, and imperial aspects and an examination of current developments in social and economic policy.
*Winter quarter. Materials fee, $1.00.* Mr. Robson.

123. COMPARATIVE GOVERNMENT (5). Prerequisite, Political Science 41.
A comparative study of the principles, structure, and operation of contemporary governmental systems with special attention to those of continental Europe.
*Spring quarter. Materials fee, $1.00.* Mr. Robson.

126. THE HISPANIC EMPIRES IN AMERICA (5). Prerequisite, Political Science 41.

A study of the political and social institutions in the Spanish and Portuguese colonial systems and their development.

*Fall quarter. Materials fee, $1.00.* Mr. Gil.

127. GOVERNMENT OF LATIN AMERICAN STATES (5). Prerequisite, Political Science 41.

The forms of organization, the functions and operations of government in Latin America with emphasis on present conditions, tendencies, and peculiar types of institutions.

*Winter quarter. Materials fee, $1.00.* Mr. Pierson.

132. MUNICIPAL GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Chartered city and town government, its origins, history, forms and relations to national, state, and county governments.

*Fall quarter. Materials fee, $1.00.* Mr. Woodhouse.

133. MUNICIPAL ADMINISTRATION IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Administrative organization, procedure, and problems of cities and towns.

*Winter quarter. Materials fee, $1.00.* Mr. Woodhouse.

134. COUNTY GOVERNMENT AND ADMINISTRATION (5). Prerequisite, Political Science 41.

A review of the historical antecedents of American counties and townships; the present organization, powers, functions, and intergovernmental relations of these units; and significant trends.

*Fall quarter. Materials fee, $1.00.* Mr. Wager.

141. INTRODUCTION TO INTERNATIONAL LAW (5). Prerequisite, Political Science 41.

Treatises, documents, and cases are studied to acquaint the student with the history and the principles of the law of nations, and the organization and procedure of international tribunals.

*Fall quarter. Materials fee, $1.00.* Mr. Frazer.

142. INTERNATIONAL ORGANIZATION AND INSTITUTIONS (5). Prerequisite, Political Science 41.

The organization and work of the United Nations and other international institutions are studied in connection with the general principles of international organization.

*Winter quarter. Materials fee, $1.00.* Mr. Frazer.

144. THE ORGANIZATION AND CONDUCT OF THE FOREIGN RELATIONS OF THE UNITED STATES (5). Prerequisite, Political Science 41.

Principal consideration is given to the organization of the government of the United States for the conduct of its foreign relations, e.g., the Department of State, the Foreign Service, etc.

*Spring quarter. Materials fee, $1.00.* Mr. Frazer.

145. CONTEMPORARY INTERNATIONAL RELATIONS OF THE UNITED STATES (5). Prerequisites, Political Science 41 and permission of the instructor.

The course is suited to undergraduates and graduates with some knowledge of international relations who wish to study the contemporary foreign policy of the United States.

*Spring quarter. Materials fee, $1.00.* Mr. Frazer.

147. CONTEMPORARY INTER-AMERICAN RELATIONS (5). Prerequisite, Political Science 41.

The evolution of the inter-American security system, recent Pan-American conferences and the activities and problems of the various continental agencies.

*Winter quarter. Materials fee, $1.00.* Mr. Gil.

151. THE ELEMENTS OF POLITICAL SCIENCE (5). Prerequisite, Political Science 41.

A study of the principles of political science and of the important theories respecting the nature, origin, forms, and ends of the state and of government.

*Fall quarter. Materials fee, $1.00.* Mr. Pierson.

154. DEVELOPMENT OF THE ENGLISH CONSTITUTION (History 141) (5). Prerequisite, Political Science 41.

Emphasis upon the major constitutional documents and the development of the national political institutions with considerable attention to the leading constitutional cases and principles of law.

*Fall quarter. Materials fee, $1.00.* Mr. Godfrey.

155. THE CONSTITUTION OF THE UNITED STATES (History 175) (5). Prerequisite, Political Science 41.

A study of the fundamental principles of constitutional interpretation and practice in the United States by means of lectures, textbooks, and cases.

*Each quarter. Materials fee, $1.00.* Mr. Monroe.

156. CONTEMPORARY PROBLEMS IN GOVERNMENT (5). Prerequisite, Political Science 41.

Laboratory problems in international, national, state, and local government and administration based on general comparison of United States, British, and Canadian governments.

*Spring quarter. Materials fee, $1.00.* Mr. Woodhouse.

157. HISTORICAL JURISPRUDENCE, ANCIENT AND MEDIEVAL (5). Prerequisite, Political Science 41.

Babylonian, Egyptian, Greek, and Hebrew Law; intensive study of evolution of Roman Law, of its revival under Justinian, and a survey of its influence in the medieval and the modern worlds.

*Winter quarter. Materials fee, $1.00.* Mr. Woodhouse.

158. HISTORICAL JURISPRUDENCE, ANGLO-AMERICAN (5). Prerequisite, Political Science 41.

Evolution of English Law to the American Revolution, its adaptation to colonial conditions, the development of branches of it in forty-seven states of the United States.

*Spring quarter. Materials fee, $1.00.* Mr. Woodhouse.

159. THE BRITISH EMPIRE (History 159) (5). Prerequisite, Political Science 41.

From the old colonial system to the constitutional development of the Commonwealth; special attention to Canada and to the important documents of Commonwealth growth, including the most recent ones.

*Spring quarter. Materials fee, $1.00.* Mr. Godfrey.

162. AMERICAN POLITICAL THOUGHT (5). Prerequisite, Political Science 41.

An analysis of the ideas underlying government and politics in the United States. (Not offered in 1949-1950.) *Fall quarter. Materials fee, $1.00.* Mr. Robson.

165. POLITICAL THOUGHT OF THE EIGHTEENTH CENTURY (5). Prerequisite, Political Science 41.

The development of liberal and democratic political thought, with emphasis on the ideas of the American and the French Revolutions.

(Not given in 1949-1950.) *Winter quarter. Materials fee, $1.00.* Mr. Pierson.

166. RECENT AND CONTEMPORARY POLITICAL THOUGHT (5). Prerequisite, Political Science 41.

The theory of constitutional democracy together with an examination of the principal lines of criticism of this form of government and of the ideologies antagonistic to it.

*Winter quarter. Materials fee, $1.00.* Mr. Coker.

167. POLITICAL THOUGHT IN LATIN AMERICA (5). Prerequisite, Political Science 41.

An analysis of the development of political philosophy in Latin America with an examination of the evolution of democratic thought.

*Spring quarter. Materials fee, $1.00.* Mr. Gil.

175. POLITICAL PARTIES AND ELECTORAL PROBLEMS IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Development of political parties and of nomination and election machinery and procedure. Intensive study of present organization, procedure, and problems of parties and of national, state, and local election laws.

*Fall quarter. Materials fee, $1.00.* Mr. Woodhouse.

181. RECENT NATIONAL POLICY AND ADMINISTRATION (5). Prerequisite, Political Science 41.

Analytical and critical survey of basic national policies affecting business, labor, agriculture, special groups and industries, and the economy in general. Foreign policy is excluded.

(Not given in 1949-1950.) *Spring quarter. Materials fee, $1.00.* Mr. Fesler.

185. FINANCIAL ADMINISTRATION (5). Prerequisite, Political Science 41.

An analysis of the fiscal agencies in federal, state, and local government; and of the principles and practices of budgeting, accounting, auditing, purchasing, tax administration, and treasury management.

*Spring quarter. Materials fee, $1.00.* Mr. Wager.

191. PUBLIC FINANCE (Economics 141) (5). Prerequisite, Economics 31-32 or equivalent.

*Every quarter.* Messrs. Heer, Ashby.

192. PROBLEMS IN FEDERAL FINANCE (Economics 142) (5). Prerequisite, Economics 141.

*Winter quarter.* Mr. Heer.

193. PROBLEMS IN STATE AND LOCAL FINANCE (Economics 143) (5). Prerequisite, Economics 31-32 or equivalent.

*Spring quarter.* Mr. Heer.

197. GOVERNMENT AND BUSINESS (Economics 197) (5). Prerequisite, Economics 31-32 or equivalent.

*Spring quarter.* Messrs. Hobbs, Carter.

## Courses for Graduates

209. PLANNING AND GOVERNMENT (5).
Survey of nature and scope of government planning, its relation to other governmental activities, and its administrative and organizational problems.
(Not given in 1949-1950.) *Fall quarter.* Mr. Fesler.

210. PUBLIC ADMINISTRATION OF RESOURCES (5). Prerequisites, Political Science 41 and 101 or equivalent.
A study of the agencies, principles, and procedures which have been evolved by the national and state governments in regulating or administering natural resources.
*Spring quarter. Materials fee, $1.00.* Mr. Wager.

221. ADMINISTRATIVE LAW (5). Prerequisites, Political Science 41 and 101 or equivalent.
Legal setting of public administration, emphasizing governmental regulatory activities. Administrative legislation, administrative adjudication, procedural restrictions, judicial review of administrative decisions, government and official liability.
(1949-1950 and alternate years.) *Fall quarter. Materials fee, $1.00.* Mr. Ashby.

225. ADMINISTRATIVE ORGANIZATION AND MANAGEMENT (5). Prerequisites, Political Science 41 and 101 or equivalent.
A study of the structural and management aspects of public administration. Organization theory and practice, policy formation processes, techniques of administrative improvement, field administration.
*Winter quarter. Materials fee, $1.00.* Mr. Ashby.

231. THE LEGISLATIVE PROCESS (5). Prerequisite, Political Science 41.
(1950-1951 and alternate years.) *Spring quarter. Materials fee, $1.00.* Mr. Jenkins.

235. THE JUDICIAL PROCESS (5). Prerequisites, Political Science 41 and 155 or equivalent.
(1949-1950 and alternate years.) *Spring quarter. Materials fee, $1.00.* Mr. Jenkins.

241. INTERNATIONAL LAW (5). Prerequisites, Political Science 41 and 141 or equivalent.
A study of the law of nations chiefly as interpreted and applied by the courts, and other organs of the government of the United States.
*Fall quarter. Materials fee, $1.00.* Mr. Frazer.

286. PRINCIPLES AND PRACTICES IN MODERN WORLD POLITICS (5). Prerequisites, Political Science 41 and 86 or equivalent.
It is intended to study the international policies of the nations particularly as these are reflected in their activities in the principal international organizations.
*Winter or spring quarter. Materials fee, $1.00.* Mr. Frazer.

## Seminar Courses for Graduates

Prerequisite, a political science major or the equivalent.

301abc. MODERN INTERNATIONAL RELATIONS (9).
*Conferences, two hours a week, fall, winter, and spring quarters. Materials fee, $1.00.* Mr. Frazer.

305. SEMINAR IN COUNTY ADMINISTRATION (5).
*Winter or spring quarter. Materials fee, $1.00.* Mr. Wager.

311abc. SEMINAR IN AMERICAN POLITICAL THEORY (9).
*Conferences, three hours a week, fall, winter, and spring quarters. Materials fee, $1.00.* Mr. Pierson.

321abc. STATE AND LOCAL GOVERNMENT (9).
*Conferences, three hours a week, fall, winter, and spring quarters. Materials fee, $1.00.* Mr. Woodhouse.

331. PROBLEMS IN PUBLIC ADMINISTRATION (5).
Individual and group research projects on particular administrative agencies and significant problems of administrative theory and practice.
(Not given in 1949-1950.) *Fall, winter, or spring quarter. Materials fee, $1.00.* Mr. Fesler.

341. SEMINAR COURSE (5).
A research course in a special field under the direction of a member of the department.

361. PROBLEMS IN RECENT AND CONTEMPORARY POLITICAL THEORY (5).
*Fall, winter, or spring quarter. Materials fee, $1.00.* Messrs. Robson, Pierson, Coker.

## PORTUGUESE

(See Romance Languages)

## DEPARTMENT OF PSYCHOLOGY

Professors: *J. F. DASHIELL, HARRY W. CRANE, ENGLISH BAGBY, JAMES W. LAYMAN, DOROTHY C. ADKINS, †LEO P. CRESPI
Associate Professors: W. J. DANIEL, IRVIN S. WOLF, HAROLD G. MCCURDY
Assistant Professors: EUGENE R. LONG, JOSEPH G. DAWSON
Lecturers: NORMAN KAPLAN, SAMUEL B. LYERLY
Instructors: M. JUDSON WHITE, D. W. CAMPBELL, OLGA LYERLY, HOWARD PAGE, HAROLD VAN COTT, GOLDIE DEMB, W. E. ORGANIST
Graduate Assistants: WINIFRED MELDRIM, EDITH T. CHEN
Psychiatric Consultant, Clinical Training Program: ANGUS C. RANDOLPH, M.D.

Undergraduate students intending to major in psychology are advised to include courses in biology, physics, mathematics, sociology, and anthropology in their studies. Programs for majors with varying directions of interest should include the following. For a *liberal education*: Psychology 122 or 126 or 133, 140 or 144 as well as courses in economics, history, sociology, anthropology, and philosophy. Stu-

*On leave, 1949-1950.
†Beginning September, 1950.

dents who anticipate graduate training as preparation for *teaching and research* should include Psychology 122, 126, 130, 140 or 144, 146 and courses in biology, physics, and mathematics as well as in the social sciences. For a professional career in *personnel*: Psychology 130, 132, 135, 136, 148, 181 and courses in mathematics, economics, and commerce. Students who plan to enter the *profession of clinical psychology* should include Psychology 122, 126, 130, 140 or 144, 141, 145, 146, 148 and courses in physiology, educational-vocational guidance, sociology, and anthropology.

For graduate students differentiated programs of work are likewise blocked out. Their descriptions may be obtained from the office of the department. Breadth and soundness of basic training are emphasized during the first year or two of graduate study. The student who desires to enter graduate work should bear in mind that both of the advanced degrees are essentially research degrees, and he should not delay in embarking upon research and in meeting the various other degree prerequisites.

Personnel and material facilities for graduate level professional training in clinical psychology are available both on and off the campus. The department also participates in the clinical training program sponsored by the Veterans Administration.

## Courses for Undergraduates

24, 25. GENERAL PSYCHOLOGY (6 each).

Psychology is presented by lectures, demonstrations, and laboratory work, as a biological science. Practical applications are made secondary to the understanding of basic concepts and phenomena.

*Five lecture and demonstration hours and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 a quarter.* Lecturers: Messrs. Dashiell, Daniel, McCurdy, Long, Lyerly. Laboratory: Messrs. White, Page, Campbell, Van Cott, Organist, Miss Query, Mrs. Lyerly.

NOTE: These courses may be elected separately, but neither may be elected as a student's first course in natural science.

33. SOCIAL PSYCHOLOGY (5). No prerequisite. May not be counted toward a major.

A general course in such topics as: cultural vs. biological determinants (customs, mores, etc.); competition vs. cooperation; discussion; leadership; public opinion and propaganda; individual differences.

*Fall quarter.* Mr. Bagby.

40. THE PSYCHOLOGY OF PERSONALITY (5). No prerequisite. May not be counted toward a major.

An elementary presentation of the part played by intelligence, emotionality, and modes of adjustment in personal problems. Some mention of types and traits of people.

*Spring quarter.* Mr. Bagby.

## Courses for Graduates and Advanced Undergraduates

NOTE: Psychology 24 and 25 are prerequisite to all courses numbered above 100.

104. ADVANCED GENERAL PSYCHOLOGY (5).
A survey of recent major experiments, to serve as an intensive review, especially for first-year graduate students. Emphasis is upon methodology.
*Five lecture hours, or equivalent, a week.* Messrs. Daniel, Dashiell.

122. HUMAN LEARNING (5).
The many technical and theoretical problems involved in memorizing, conditioning, and problem solving.
*Four lecture and two laboratory hours a week. Laboratory fee, $1.00.* Messrs. Daniel, Dashiell, Long.

126. CHILD DEVELOPMENT (5).
Survey of development of the normal child, with particular attention to social relations. Biological and cultural factors are considered.
*Five lecture hours a week.* Mr. McCurdy.

130. ELEMENTARY PSYCHOLOGICAL STATISTICS (5).
Distributions and correlations, as in the conventional courses in the subject. Psychological types of problems used.
*Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $2.00.* Misses Adkins, Demb.

132. TEST CONSTRUCTION (5). Prerequisites, Psychology 130, 148.
Training in the techniques of constructing and planning of written tests, essay and objective, and of performance tests for aptitudes and achievement. Other types of measuring devices are given some attention.
*Three lecture and four laboratory hours a week. Laboratory fee, $2.00.* Misses Adkins, Demb.

133. INTRODUCTION TO SOCIAL PSYCHOLOGY (5).
Social groupings; dynamics of person-to-person relations.
*Four lecture and two laboratory hours a week. Laboratory fee, $1.00.* Mr. Crespi.

135. PERSONNEL PSYCHOLOGY (5).
Methods of analyzing jobs and of selecting, training, motivating, and evaluating employees.
*Four lecture and two laboratory hours a week. Laboratory fee, $2.00.* Misses Adkins, Demb.

136. INTERVIEWING TECHNIQUES (5).
Emphasis is placed upon the interview and a technical analysis of what procedures do and do not fit particular needs.
*Five lecture hours a week.* Mr. Dawson.

140. PERSONALITY (5).
Development and modern application of the concept of personality as a more or less self-determining system of beliefs, values, and behavior tendencies.
*Five lecture hours a week.* Mr. McCurdy.

141. INTRODUCTION TO THE PSYCHOLOGICAL CLINIC (5). Prerequisites, Psychology 146; and any one of 140, 144, 145, or 148.
A survey of the function of the clinic, types of cases seen, various techniques utilized to understand (diagnose) and to treat maladjusted persons; functions of the various personnel.
*Five lecture hours a week.* Mr. Layman.

144. MENTAL HYGIENE (5).
A genetic approach to problems of adjustment in relation to causative factors found in infancy, preschool, school, and adult periods. Case material is used with direct application to specific problems.
*Five lecture hours a week.* Mr. Crane.

145. THE DEVIANT CHILD (5).
Causes, physical basis, and characteristics of deviant children; their part in education, delinquency, and occupations.
*Five lecture hours a week.* Mr. Crane.

146. PSYCHONEUROSES AND PSYCHOSES (5).
Sensory, emotional, memory, etc., abnormalities; their neural bases; their groupings into the syndromes of the major and minor mental disorders.
*Five lecture hours a week.* Messrs. Crane, Wolf.

148. TESTS AND MEASUREMENTS (5).
Survey of all types of psychological measuring instruments.
*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Mr. Crane.

151, 152, 153. ORIGINAL PROBLEMS (5 each).
*One lecture and eight laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, $3.00 a quarter.* Staff.

181. LABORATORY ANALYSIS IN PERSONNEL WORK (5). Advised prerequisites, Psychology 135 or Commerce 155.
A laboratory course in personnel techniques, as applied practically to job analysis, constructing application blanks, rating scales, etc.
*Ten laboratory hours a week. Laboratory fee, $3.00.* Misses Adkins, Demb.

## Courses for Graduates

201, 202. EXPERIMENTAL METHODS AND PROCEDURES (5 each). Prerequisite, Psychology 130.
Laboratory working over of the principal problems of classic experimentation: psychophysics, sensory qualities, perception, reaction time, feeling, work and fatigue, conditioning, etc. Intensive study of principles of experimental design.
*One lecture and eight laboratory hours a week. Laboratory fee, $3.00.* Messrs. Daniel, Dashiell, Long.

205. NEUROPHYSIOLOGICAL PSYCHOLOGY (5).
The neural bases of behavior, with emphasis upon structural character of cord, brain, and sense organs. Laboratory work with slides and specimens.
*Three lecture and four laboratory hours a week. Laboratory fee, $3.00.* Mr. Crane.

206. PHYSIOLOGICAL BASIS OF BEHAVIOR (5).
Functioning of various organs and organ-systems as determinants of over-all behavior.
*Five lecture hours a week.* Messrs. Dashiell, Long.

211. HISTORICAL SURVEY OF PSYCHOLOGY (5).
Most emphasis is upon developments of the eighteenth and nineteenth centuries in German experimental, French clinical, British biological, and Russian objective movements.
*Five lecture hours a week.* Messrs. Dashiell, McCurdy.

212. CONTEMPORARY PSYCHOLOGICAL TRENDS (5).
Readings in the original writings of structuralism, behaviorism, gestalt, psychoanalysis, and other recent movements.
*Five lecture hours a week.* Messrs. Dashiell, McCurdy.

225. ANIMAL BEHAVIOR (5).
Survey of experimental work in motivation and development, sensory capacities, learning, and other basic psychological concepts. Laboratory work to familiarize student with simple research procedures.
*Four lecture and two laboratory hours a week. Laboratory fee, $2.00.* Mr. Daniel.

230. ADVANCED PSYCHOLOGICAL STATISTICS (5). Prerequisite, Psychology 130.
Extends the concept of correlation to include multivariate analysis, including partial and multiple correlation, reliability, factor analysis; also curve fitting, sampling, etc.
*Three lecture and four laboratory hours a week. Laboratory fee, $2.00.* Misses Adkins, Demb.

232. TEST THEORY AND ANALYSIS (5). Prerequisite, Psychology 130; 132 and 230 desirable.
Principles of mental measurement; theoretical bases of analyzing tests; selection and weighting of composite tests; scaling theory.
*Three lecture and four laboratory hours a week. Laboratory fee, $2.00.* Misses Adkins, Demb.

233. METHODS OF SOCIAL PSYCHOLOGY (5).
An analysis of methods of investigation in Social Psychology with their application to the Social Sciences. Major attention will be focused upon survey methodology with particular emphasis upon the techniques, contributions, and limitations of public opinion polling.
*Five lecture hours a week.* Mr. Crespi.

234. MATHEMATICAL PSYCHOLOGY (5). Prerequisite, permission of instructor.
Illustrations of psychology as a quantitative rational science. Topics from a wide range: vision, nervous system, learning, war psychology, attention, fatigue, and others.
*Five lecture hours a week, offered as demand warrants.* Miss Adkins.

240. PSYCHODYNAMICS OF BEHAVIOR (5). Prerequisites, Psychology 140, 201 or 202.
Laboratory-lecture study of selected topics in the general area of emotion and motivation.
*Three lecture and four laboratory hours a week.* Mr. McCurdy.

246. ADVANCED ABNORMAL PSYCHOLOGY (5). Prerequisites, 140, 146 or 212.
Consideration of major current personality theories with special reference to their interpretation of the principal abnormal behavior syndromes.
*Five lecture hours a week.* Mr. Layman.

247. METHODS OF MENTAL EXAMINATION (5).
Methods of securing information pertinent to adequate evaluation of the problems leading to case referral, procedures to be utilized in case study, and interpretation of test data.
*Four lecture and two laboratory hours a week. Laboratory fee, $3.00.* Mr. Crane.

249. CLINICAL PRACTICES, INDIVIDUAL TESTS (CHILDREN) (5). Prerequisite, Psychology 148 and permission of the instructor.

Emphasis is upon the acquisition of skill in the administration, scoring, and interpretation of psychological tests most frequently used in the examination of children but with some reference to the testing of adults.

*Ten laboratory hours a week. Laboratory fee, $3.00.* Messrs. Crane, Kaplan.

250. CLINICAL PRACTICES, INDIVIDUAL TESTS (ADULTS) (5). Prerequisite, Psychology 148 and permission of the instructor.

Emphasis is upon the acquisition of skill in the administration, scoring, and interpretation of psychological tests most frequently used in the examination of adults but with some reference to the testing of children.

*Ten laboratory hours a week. Laboratory fee, $3.00.* Messrs. Crane, Kaplan.

251, 252, 253. RESEARCH IN PSYCHOLOGY (5 each). Prerequisite, permission of the instructor under whom research is to be conducted.

*Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 a quarter.* Staff.

255. THEORY OF PROJECTIVE TECHNIQUES (5). Prerequisites, Psychology 141, 146, 249, 250.

As clearly distinguished from other psychometric methods, projective methods of examination as now widely employed, their psychological assumptions, validity, and reliability.

*Three lecture and four laboratory hours a week.* Mr. Layman.

256-257. CLINICAL PRACTICES IN PROJECTIVE TECHNIQUES (5 each). Prerequisites, Psychology 255 and permission of the instructor.

256: To develop competence in the scoring and interpretation of projective tests administered to normal subjects. 257: To obtain experience in examining clinical cases.

*Ten hours a week, winter and spring quarters.* Mr. Layman.

258. METHODS OF PSYCHOTHERAPY (5). Prerequisite, Psychology 255.

An intensive survey of the theories and techniques of the most frequently employed methods of psychotherapy.

*Five lecture hours a week.* Mr. Wolf.

259-261. CLINICAL PRACTICES IN PSYCHOTHERAPY (5 each). Prerequisites, Psychology 258 and permission of the instructor.

Supervised training in psychotherapeutic procedures with clinical subjects, further study of the literature, and participation in clinical staff conferences.

*Ten hours a week.* Messrs. Wolf and Dawson (Dr. Angus C. Randolph, psychiatric consultant).

271. BEHAVIOR THEORIES (5).

Contemporary theories of behavior and learning taken up critically and comparatively. Student to design problems within each.

*Five lecture hours a week.* Mr. Daniel.

325. SEMINAR IN THEORETICAL-EXPERIMENTAL PSYCHOLOGY (3).

The topic will vary with the interests of students and staff members.

*Three hours a week, fall or winter or spring quarter, to be specially announced.* Staff.

326. SEMINAR IN CLINICAL PSYCHOLOGY (3).
Systematic surveys of research in (a) personality dynamics; (b) techniques currently employed with specific traits; (c) techniques employed in personality analysis; and (d) techniques with maladjusted persons as shock, drug, hypnotic, etc.
*Each quarter.* Staff.

327. SEMINAR IN ABNORMAL PSYCHOLOGY (3).
Systematic reviews of theoretical and experimental studies in psychopathology, animal neuroses, and related topics.
*(Offered as needed.)* Staff.

341, 342. ADVANCED RESEARCH (5 each).
*Five laboratory hours a week, any quarter.* Staff.

NOTE: The student is referred also to courses in educational psychology, statistics, neurology, physiology, sociology, and anthropology listed in other departments of the University.

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## SCHOOL OF PUBLIC HEALTH

Professors: EDWARD GRAFTON MCGAVRAN, HERMAN GLENN BAITY, RUTH WARWICK HAY, LUCY SHIELDS MORGAN, ALBERT HUGHES BRYAN, JOHN EDGAR LARSH, JR., JOHN JOSEPH WRIGHT

Research Professors: HAROLD JOSEPH MAGNUSON, WILLIAM PERRY RICHARDSON

Associate Professors: MARGARET BLEE, EMIL THEODORE CHANLETT, GEORGE O. DOAK, BERNARD GEORGE GREENBERG, CATHERINE FRANCES MACKINNON, CECIL GEORGE SHEPS, EUNICE NICKERSON TYLER

Visiting Associate Professors: MAURICE HERZBERGER GREENHILL, JOHN WILLIAM ROY NORTON

Assistant Professors: LEON DAVID FREEDMAN, MARVIN LEROY GRANSTROM, ELTA MAE MAST, FREDERICK A. THOMPSON, EVELYN ELIZABETH JOHNSON

Visiting Assistant Professors: ALBERT DERWIN COOPER, O. DAVID GARVIN, ROBERT J. MURPHY

Instructors: IDA HOWELL FRIDAY, WILLIAM CHARLES GIBSON, HANS JAFFE

Part-time Instructor: JAMES RICHARD HENDRICKS

### Courses for Graduates and Advanced Undergraduates

Before registering for any course in public health, the academic student must secure the permission of his dean and also that of the Dean of the School of Public Health. For further information see the special catalogue of the School of Public Health.

P.H. 101. EPIDEMIOLOGY (3).
*Three hours of lectures, demonstrations, and seminars a week, winter quarter.* Dr. McGavran.

P.H. 106. VENEREAL DISEASE CONTROL PROBLEMS (2).
*Two lecture hours a week, fall quarter.* Dr. Magnuson.

P.H. 111. PUBLIC HEALTH ADMINISTRATION (3).
*Three lecture hours a week, winter quarter.* Drs. Wright, Richardson.

P.H. 112. MATERNAL HYGIENE (2½). Prerequisite, medical degree.
*Two lectures and one hour of demonstration a week, winter quarter.* Dr. Murphy.

P.H. 113. CHILD HYGIENE (2½). Prerequisite, medical degree.
*Two lectures and one hour of demonstration a week, winter quarter.* Dr. ———.

P.H. 114. MENTAL HEALTH (2).
*Two lecture hours a week.* Dr. Greenhill.

P.H. 115. PUBLIC HEALTH EDUCATION (2).
*Two hours of lecture and demonstration a week, fall or winter quarter.* Miss Morgan, Mrs. Tyler.

P.H. 118. HEALTH AND SICKNESS IN MODERN SOCIETY (3).
*Three lecture hours a week, summer quarter.* Dr. C. G. Sheps.

P.H. 121. PUBLIC HEALTH STATISTICS (3½).
*Two lecture and three laboratory hours a week, fall quarter.* Mr. Greenberg.

P.H. 131. PARASITISM AND HUMAN DISEASE (3½). Prerequisites, General Zoology 41, 42 or equivalent.
*Two lecture and three laboratory hours a week, fall quarter.* Messrs. Larsh, Hendricks; assistants.

P.H. 135. HUMAN PARASITOLOGY (3½). Prerequisite, P.H. 131.
*Two lecture and three laboratory hours a week, winter quarter.* Messrs. Larsh, Hendricks; assistants.

P.H. 140. PUBLIC HEALTH PROBLEMS (2½-5). Prerequisite, to be arranged with the faculty in each individual case, depending upon the problem that is to be studied.
*Five to ten hours a week, each quarter.* Staff of the School of Public Health.

P.H. 141. PUBLIC HEALTH NUTRITION (3).
*Two lecture and two laboratory hours a week.* Dr. Bryan and Miss MacKinnon.

P.H. 161. THE PRINCIPLES OF SANITATION (4).
*Three lecture and two laboratory hours a week, fall quarter.* Mr. Chanlett.

P.H. 162. SANITARY CHEMISTRY AND BIOLOGY I (3). Prerequisite, general chemistry.
*Three lecture hours a week, fall quarter.* Mr. Chanlett.

P.H. 163. SANITARY CHEMISTRY AND BIOLOGY II (5). Prerequisite, P.H. 162.
*Two lecture and six laboratory hours a week, winter quarter.* Mr. Granstrom.

P.H. 164. SANITARY CHEMISTRY AND BIOLOGY III (5). Prerequisites, P.H. 162, 163.
*Two lecture and six laboratory hours a week, spring quarter.* Mr. Granstrom.

P.H. 165. ENVIRONMENTAL SANITATION METHODS (3½). Prerequisites, P.H. 131, 161.
*Two lecture and three laboratory hours a week, winter quarter. Laboratory fee, $3.50.* Messrs. Baity, Chanlett.

P.H. 181. PUBLIC HEALTH PROBLEMS IN INDUSTRY (3). Corequisite, P.H. 101.
*Three lecture hours a week, winter quarter.* Mr. Chanlett.

P.H. 190. PRINCIPLES AND PRACTICES OF PUBLIC HEALTH NURSING (4).
*Four lecture hours a week, fall quarter.* Miss Hay.

P.H. 191. PUBLIC HEALTH NURSING ORGANIZATION AND ADMINISTRATION (4).
*Four lecture hours a week, winter quarter.* Miss Hay.

P.H. 192. GROUP WORK: ITS INTERPRETIVE FACTORS (3).
*Three lecture hours a week, winter quarter.* Miss Blee.

P.H. 193. APPLIED PUBLIC HEALTH NURSING FIELD PRACTICE (15).
Special programs will be arranged with consideration of the experience and particular needs of the students.
*Five and one-half days a week.* Misses Hay, Blee.

P.H. 194. VENEREAL DISEASE CONTROL (2).
*Two lecture hours a week, winter quarter.* Dr. Magnuson.

P.H. 195. THE PUBLIC HEALTH NURSE IN A MATERNAL HEALTH PROGRAM (3).
*Three lecture hours a week, fall quarter.* Miss Blee.

P.H. 196. SPECIAL FIELDS IN PUBLIC HEALTH NURSING (10). Prerequisites, two of the following P.H. Nursing courses: P.H. 190, 191, 192, 195.
*Twenty lecture hours a week.* Misses Hay, Blee.

P.H. 198. GROWTH AND DEVELOPMENT OF THE CHILD (3).
*Three lecture hours a week, winter quarter.* Dr. Mindel Sheps.

P.H. 199. PUBLIC HEALTH NURSING: AN INTERPRETATION (2).
*Two lecture hours a week, fall quarter.* Miss Hay.

## Courses for Graduates

P.H. 201. EPIDEMIOLOGY II (5).
A continuation of Epidemiology 101.
*Five hours of lectures, demonstrations, and seminars a week, spring quarter.* Dr. McGavran.

P.H. 202. TUBERCULOSIS CONTROL METHODS (3). Prerequisite, medical degree.
*Two lecture hours and two clinic demonstrations a week.* Drs. Wright, Cooper.

P.H. 203. EPIDEMIOLOGY III (2½). Prerequisites, P.H. 121, Epidemiology I or equivalent.
*One lecture and three laboratory hours a week, spring quarter.* Dr. Wright.

P.H. 206. VENEREAL DISEASE CONTROL METHODS (2½). Prerequisite, medical degree.
*Two lecture and one clinic demonstration a week, fall quarter.* Dr. Magnuson.

P.H. 211. PUBLIC HEALTH ADMINISTRATION (5). Prerequisite, P.H. 111.
*Three lecture and four or more field-trip hours a week, spring quarter.* Drs. Wright, Richardson, C. G. Sheps.

PH. 212. THE PLANNING OF ENVIRONMENTAL SANITATION PROGRAMS (3). Prerequisites, P.H. 101, 161.
*Two lecture and two laboratory hours a week, spring quarter.* Mr. Chanlett.

P.H. 213. MEDICAL CARE (2).
*Two seminar hours a week, spring quarter.* Dr. C. G. Sheps.

P.H. 215. COMMUNITY ORGANIZATION FOR HEALTH EDUCATION (3).
*Three lecture hours a week, fall and winter quarters.* Miss Morgan; visiting lecturers.

P.H. 216. FIELD WORK IN PUBLIC HEALTH EDUCATION (15).
This course is open only to students majoring in health education.
*Spring quarter.* Miss Morgan, Mrs. Tyler, Miss Mast; health education consultants of training centers.

P.H. 217abc. PROBLEMS IN HEALTH EDUCATION (2½-5).
*Fall, winter, and summer quarters.* Mrs. Tyler.

P.H. 218. METHODS IN PUBLIC HEALTH EDUCATION (3).
*Three lecture hours a week, fall or winter quarter.* Miss Morgan, Mrs. Tyler.

P.H. 219 (117). SCHOOL HEALTH EDUCATION (3).
*Three hours of lecture and demonstration a week, fall or winter quarter.* Miss Mast; visiting lecturers.

P.H. 232. PARASITOLOGICAL METHODS (5). Prerequisite, Human Parasitology (P.H. 135).
*Three lecture and six laboratory hours a week, spring quarter.* Mr. Larsh; assistants.

P.H. 233. MALARIOLOGY (5). Prerequisite, P.H. 131 or Zoology 41, 42, or equivalent.
*Three lecture and four laboratory hours a week, spring quarter.* Messrs. Larsh, Baity, Hendricks; assistants.

P.H. 234. MEDICAL ENTOMOLOGY AND INSECT CONTROL (3½). Prerequisites, Zoology 41, 42, and P.H. 131 and 135, or equivalent.
*Two lecture and three laboratory hours a week, spring quarter.* Mr. Larsh; assistants.

P.H. 241 (141). PRINCIPLES OF PUBLIC HEALTH NUTRITION (3).
*Two lecture and two laboratory hours a week, winter quarter.* Dr. Bryan and Miss MacKinnon.

P.H. 242. PROBLEMS IN PUBLIC HEALTH NUTRITION (3). Prerequisite, P.H. 241 or its equivalent.
*Two seminar and two laboratory hours a week, any quarter.* Dr. Bryan.

P.H. 249. WORKSHOP IN PUBLIC HEALTH NUTRITION (3-9).
Open by special permission to a limited number of qualified graduate students.
*Any quarter.* Dr. Bryan and Miss MacKinnon.

P.H. 261. MILK AND FOOD CONTROL (3). Prerequisites, P.H. 101, 131, and P.H. 161.
*Two lecture and three laboratory hours a week, spring quarter.* Mr. Chanlett.

P.H. 262. LIMNOLOGY AND STREAM POLLUTION (5). Prerequisites, P.H. 162 and 163.
*Three lecture and four laboratory hours a week, spring quarter.* Mr. Baity.

P.H. 271. HYDROLOGY (3). Prerequisite, Hydraulics (Math. 124).
*Three lecture hours a week, fall quarter.* Mr. Granstrom.

P.H. 272. WATER SUPPLY AND SEWERAGE (5). Prerequisites, Hydraulics (Mathematics 124), Strength and Materials (Math. 123).
*Three lecture and four laboratory hours a week, fall quarter.* Mr. Baity.

P.H. 273. WATER PURIFICATION (5). Prerequisites, P.H. 272 and 162; corequisite, P.H. 163.
*Four lecture and two laboratory hours a week, winter quarter.* Mr. Baity.

P.H. 274. SEWAGE TREATMENT AND WASTE DISPOSAL (5). Prerequisite, P.H. 273; corequisite, P. H. 164.
*Four lecture and two laboratory hours a week, spring quarter.* Mr. Baity.

P.H. 275. INDUSTRIAL WASTES (3). Prerequisite, P.H. 163; corequisite, P.H. 164.
*Three lecture hours a week, spring quarter.* Mr. Granstrom.

P.H. 276. INDUSTRIAL WATER SUPPLIES (3). Corequisites, P.H. 163, 273.
*Three lecture hours a week, winter quarter.* Mr. Granstrom.

P.H. 281. INDUSTRIAL HYGIENE AND SANITATION (5). Prerequisites, P.H. 162 and 181.
*Three lecture and four laboratory hours a week, spring quarter.* Mr. Chanlett.

## Research Courses

The courses described below, with the exception of P.H. 317 and Ed. 376ab, may be continued for several quarters and for more than one academic year. Credit of 2½ quarter hours or more may be earned each quarter in any course.

P.H. 301. RESEARCH IN EPIDEMIOLOGY (2½ or more).
*Five or more laboratory hours a week.* Drs. McGavran, Wright.

P.H. 306. RESEARCH IN VENEREAL DISEASES (2½ or more).
*Five or more laboratory hours a week.* Dr. Magnuson.

P.H. 311. RESEARCH IN PUBLIC HEALTH ADMINISTRATION (2½ or more).
*Five or more laboratory hours a week.* Drs. Wright, Richardson, C. G. Sheps.

P.H. 315. RESEARCH IN HEALTH EDUCATION (2½ or more).
Open by special arrangement to students doing advanced graduate work. Research problems in community health education, public health education, and school health education.
*Five or more laboratory hours a week.* Miss Morgan, Mrs. Tyler.

P.H. 317. SEMINAR IN HEALTH EDUCATION (3).
Open by special arrangement to students doing advanced graduate work. Directed reading and reports on recent advances in public health education. Systematic review of the principal journals in the fields of public health and education.
*Three hours a week, any quarter.* Miss Morgan, staff.

P.H. 321. RESEARCH IN STATISTICS (2½ or more).
Individual arrangements may be made by the advanced student to spend part or all of his time in supervised investigation of selected problems in statistics.
*Five or more laboratory hours a week.* Mr. Greenberg.

P.H. 331. RESEARCH IN PREVENTIVE MEDICINE (2½ or more).
*Five or more laboratory hours a week.* Dr. McGavran.

P.H. 332. RESEARCH IN PARASITOLOGY (2½ or more).
*Five or more laboratory hours a week.* Mr. Larsh.

P.H. 341. RESEARCH IN PUBLIC HEALTH NUTRITION (2½ or more).
*Five or more laboratory hours a week.* Dr. Bryan.

P.H. 361. RESEARCH IN SANITARY SCIENCE (2½ or more). Prerequisites or corequisites, P.H. 101, 131, 161, 162, 163, 164.
*Five or more laboratory hours a week.* Messrs. Baity, Chanlett, Granstrom.

P.H. 371. RESEARCH IN SANITARY ENGINEERING (2½ or more). Prerequisites or corequisites, P.H. 162, 163, 164, 272, 273, 274.
*Five or more laboratory hours a week.* Messrs. Baity, Chanlett, Granstrom.

P.H. 381. RESEARCH IN INDUSTRIAL SANITATION (2½ or more). Prerequisite or corequisite, P.H. 281.
*Five or more laboratory hours a week.* Mr. Chanlett.

Ed. 376ab. SEMINAR IN EDUCATION (3 to 5).
Open only to students doing advanced graduate work. One or more groups will be organized each quarter for intensive study of selected problems involving analysis of research and examination of educational literature.
*Three or five hours a week, any quarter.* Staff of the School of Education.

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## DEPARTMENT OF RADIO

Professor: EARL WYNN
Assistant Professors: J. L. MORRISON, ROBERT F. SCHENKKAN, EDWARD E. FREED, ARTHUR V. BRISKIN
Instructors: RHODA M. HUNTER, JOHN E. YOUNG

Interests of students pursuing a radio major fall under the following categories: (1) writing for radio; (2) speaking or acting for radio; (3) the planning and production of radio programs; (4) adapting and performing music for radio; (5) the utilization of radio in the classroom; (6) the business side of radio*; and (7) technical aspects of radio. Because of these diversified interests each student majoring in radio will be required to plan his curriculum carefully with the Department of Radio.

The course work, laboratories, and extracurricular activities of the Department of Radio are planned with three objectives in mind: to

*The student interested in the business side of radio will major in the School of Commerce and take his non-divisional electives in the Department of Radio. See School of Commerce—Radio Curriculum, pp. 163.

give the student a broad educational background; to provide him with a survey of radio broadcasting; and to offer him an opportunity to explore those phases of radio in which he is most interested.

Certain aptitudes on the part of the student are necessary to his successful pursuit of the radio major as an undergraduate. An attempt to discover these aptitudes will be made by means of a qualifying examination, observation of his extracurricular activities in radio during his freshman and sophomore years, and most careful observation of his classroom and laboratory work during his first quarter as a major in the Department of Radio.

Except for Radio 70 (Introduction to Radio) all courses are restricted to majors in radio; double-listed courses are available to majors in those departments in which the courses are double-listed.

The student should apply for entrance to the Department of Radio before the end of his sophomore year.

Requirements for an undergraduate with a major in radio consist of a minimum of eighteen courses distributed as follows:

*Required:* Introduction to Radio (70).

*At least one course from the following:* Speaking and Acting for the Microphone (71); Continuity Writing for Radio (72).

*At least one course from the following:* News Writing for Radio (73); Dramatic Script Writing for Radio (74); Radio Production (75).

*At least two courses from the following:* Advanced Script Writing (80); Advanced Dramatic Production (81); Program Planning for Radio (83).

*Additional courses in allied subjects in the communication field which the student may elect upon the advice and consent of the Head of the Department:* Elementary Motion Picture Production (85); Motion Picture Laboratory (86); Elementary Television Writing and Production (90).

Upon the advice of the head of the department, the student shall elect *four to seven courses in allied departments of the Division of the Humanities;* and *four to seven courses from other divisions.*

## Courses for Undergraduates

70. INTRODUCTION TO RADIO (Dramatic Art 70) (5).

A survey course covering the organization and operation of stations and networks, participating organizations, the audience, the program, the servicing of programs, and broadcasting to schools. Prerequisite to all courses in radio broadcasting leading to a major in radio.

*Fall and winter quarters.* Miss Hunter and guest lecturers.

70A. INTRODUCTION TO RADIO. Laboratory (1).

Small group instruction in the use of the basic radio equipment. Required of all radio majors and all dramatic art majors planning to enroll in Radio 71 and/or Radio 75.

*Fall and winter quarters. Fee for materials, $2.00.* Mr. Young.

71. SPEAKING AND ACTING FOR THE MICROPHONE (Dramatic Art 71) (5). Prerequisites, Radio 70 and English 40 (taught by Mr. Wynn) or permission of the instructor.

An introduction to speaking and acting for an aural medium: lectures, discussion, and laboratories.

*Three lecture and four laboratory hours a week, winter and spring quarters. Fee for materials, $2.00.* Mr. Wynn.

72. CONTINUITY WRITING (Journalism 72). No prerequisite.

A study of the principles and methods of writing for an aural medium; application will be made in the writing of all kinds of continuity except news and dramatic forms.

*Each quarter. Fee for materials, $2.00.* Mr. Morrison.

73. NEWS WRITING FOR RADIO (Journalism 73) (5). No prerequisite.

A study of the principles of newscasting and the methods involved in editing and writing the news program.

*Winter and spring quarters. Fee for materials, $2.00.* Mr. Morrison.

74. DRAMATIC SCRIPT WRITING FOR RADIO (Dramatic Art 74) (5). Prerequisite, Radio 70.

A study of some basic forms of radio unit drama, including dramatic-narrative and documentary drama, both original and in adaptation.

*Winter and spring quarters.* Mr. Schenkkan.

75. RADIO PRODUCTION (Dramatic Art 75) (5). Prerequisites, Radio 70 and 71 or 72.

A study of the principles and methods of direction and production of talk, musical, and variety programs with emphasis on those basic principles which underlie all radio directing.

*Three lecture and four laboratory hours a week, fall and spring quarters. Fee for materials, $2.00.* Mr. Young.

75S. RADIO PRODUCTION WORKSHOP (5). Open to Air Science and Tactics students only. (See AROTC, pp. 194.)

A study of the principles and methods of writing, directing, and producing talk, musical, and simple dramatic programs with emphasis upon radio as a public relations medium.

*Three lecture and four laboratory hours a week, winter quarter. Fee for materials, $2.00.* Mr. Young and radio staff.

80. ADVANCED DRAMATIC SCRIPT WRITING FOR RADIO (5). Prerequisite, Radio 74.

A study of more complex forms of radio dramatic writing. Open to seniors only.

*Fall quarter.* Mr. Schenkkan.

81. ADVANCED DRAMATIC PRODUCTION (5). Prerequisite, Radio 75.

A study of complex program types with emphasis on advanced methods of dramatic production. Open to seniors only.

*Three lecture and four laboratory hours a week, winter quarter. Fee for materials, $2.00.* Mr. Briskin.

83. PROGRAM PLANNING FOR RADIO (5). Prerequisite, Radio 80 or 81.
An intensive study of programming, traffic, and station problems. Audiences and markets will be analyzed, and the building and promotion of individual programs will be considered. Open to seniors only.
*Spring quarter.* Mr. Briskin.

85. ELEMENTARY MOTION PICTURE PRODUCTION (5).
Registration is limited to fifteen and restricted to radio and dramatic art majors. Before registering for this course, students must secure the permission of Professor Freed.
An elementary course dealing with the basic principles of writing, producing, and directing the sound screen play.
*Three lecture and four laboratory hours, fall quarter. Fee for materials, $5.00.* Mr. Freed.

86. MOTION PICTURE LABORATORY (3). Prerequisite, Radio 85.
Registration is limited to fifteen and restricted to radio and dramatic art majors. who have completed Radio 85 with distinction. Students must secure the permission of Professor Freed before registering.
This course is a laboratory continuation of Radio 85, designed for those students who have shown outstanding promise. It will require actual participation on the part of the student in writing and directing films produced by the Communication Center.
*Six laboratory hours, winter quarter. Fee for materials, $10.00.* Mr. Freed.

90. ELEMENTARY TELEVISION WRITING AND PRODUCTION (5). Prerequisites, Radio 80, 81, 85.
Registration is limited to ten and restricted to senior radio and dramatic art majors. Students must secure the permission of Professor Wynn before registering.
This course will survey the television industry and will emphasize specifically current and experimental methods of television writing and production.
*Three lecture and four laboratory hours, spring quarter. Fee for materials, $10.00.* Department of Radio staff.

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## DEPARTMENT OF RELIGION

Professors: ARNOLD S. NASH, J. P. HARLAND, A. C. HOWELL, P. H. EPPS
Associate Professor: BERNHARD W. ANDERSON
Assistant Professor: CONSTANTINE CAVARNOS
Lecturer: MAURICE A. KIDDER
Instructor: WILLIAM H. POTEAT

### PROVISIONAL STATEMENT

The first function of this department is to help students to understand the origin, the development, and the significance of the Judaic-Christian tradition. In other words, the department is concerned with:

(1) Biblical literature, history, and theology;
(2) the history of religion in Western civilization;

(3) the implications of Christianity for the thought and practice of today.

It is from such an angle that Christianity (or any other religion) can be regarded as a separate subject for study, and that is why the University has an independent department devoted to the study of religion.* However, just as Christianity is relevant to the whole of life, so Christian thought has a bearing on the whole of knowledge. Thus the second function of the department is to relate the study of religion to other fields of learning and so help to integrate, in terms of Christian insights, the knowledge that a student acquires in the various subjects of study described in the university curriculum. It is for this reason (among others) that courses in religion are given not only by teachers from within the department but by teachers from other departments.

Any student planning to take religion as the field of his major in studying for the degree of A.B. is advised to consult with Dr. Nash as early as possible. By early and proper arrangement of his course of study, it is possible for a student who intends to enter the ministry to achieve two advantages. The first is that arising from taking a major in religion at the undergraduate level and the second is that of taking those courses in the humanities, the natural and the social sciences that are recommended by the American Association of Theological Schools as the appropriate foundation for professional training for the ministry in a seminary or a university divinity school. Similarly it is possible for a student in the School of Education to take courses that produce accreditation for high school teaching in religion in addition to another subject, such as history or chemistry. There is no fixed set of courses, therefore, for an undergraduate major in religion. Each student after taking the basic courses, Religion 28, Religion 30, and Philosophy 22, builds on this foundation a program of study appropriate to his present needs and future expectations. For example, a major in religion for a student whose primary interest is in education, whether in school or church, will consist of the following courses in the department: 45, 80, 81, 92, 95, 103. A student majoring in religion may take the course Marriage (Sociology 62) for credit in religion.

Programs of study leading to the degrees of M.A. and Ph.D. will be proposed in the near future. The former degree is normally sought

*The specific study of other religions will soon be represented in the curriculum; the present plan is to invite as Visiting Professor for one quarter each year a scholar from abroad whose major field of interest lies in one of the non-Christian religions.

by those students who wish to specialize in the teaching of religion in public schools or to take up student work with the different religious foundations. The latter degree is normally taken by those students who wish to teach in institutions of higher education.

In addition, plans have been made to arrange courses of study that provide a minor in religion for M.A. students and for Ph.D. students whose major field of study lies elsewhere. The purpose of such courses is to furnish future teachers of history, sociology, English, psychology, and the like with a context of study that will enable them to see the place of their special field of interest in a Christian view of man, history, and society. Such a course of study can be a valuable first step towards the achievement of a conscious philosophy of higher education that every college or university teacher should possess.

## Courses for Undergraduates

28. THE ORIGIN AND SIGNIFICANCE OF THE BIBLE (5).
An introduction to the literature of the Bible, with special consideration of the impact of the Hebrew-Christian faith upon modern man as he seeks a religious orientation in the contemporary situation.
*Any quarter.* Messrs. Anderson and Kidder.

30. THE RELIGIOUS BACKGROUND OF WESTERN CIVILIZATION (5).
A historical study of the impact of the faith of the Old Testament, Graeco-Roman religion, Teutonic religion, and Christianity upon the life and thought of the Western world.
*Fall quarter.* Mr. Nash.

31. CHRISTIAN ETHICS AND MODERN PROBLEMS (5).
A consideration of the relevance of the Christian faith to problems of war and peace, economic enterprise, marriage and the family, and the function of the state and international organizations in the contemporary scene.
*Fall quarter.* Mr. Kidder.

45. CHRISTIANITY AND THE RELIGIONS OF THE WORLD (5).
A study of the Christian faith as compared to and contrasted with classical religions, such as Hinduism, Confucianism, Buddhism, Mohammedanism, and also the new political religions, such as Communism and Nationalism.
*Winter quarter.* Mr. Nash.

50-51. ELEMENTARY HEBREW (6).
A beginning course introducing the student to grammar and basic vocabulary. A standard textbook will be supplemented by easy readings from the Old Testament.
*At times to be arranged for two quarters.* Mr. Anderson.

80. THE MAKING AND MEANING OF THE OLD TESTAMENT (5).
A study of the beginnings of Hebrew religion in the Mosaic period, the rise of classical prophecy, and the emergence of Judaism.
*Winter quarter.* Mr. Anderson.

81. THE MAKING AND MEANING OF THE NEW TESTAMENT (5).
A course designed to help the student gain an appreciation of both the newness of the Christian religion and its continuity with Israel's historic faith.
*Spring quarter.* Mr. Anderson.

85. ARCHAEOLOGY AND THE BIBLE (Classics 85) (5).
The results of the exploration and excavations in Palestine will be studied for the light they throw on Biblical history. Attention will be given to the art and civilization of the peoples of the Old Testament, particularly of the pre-exilic period.
*Fall quarter.* Mr. Harland.

87. LITERARY ASPECTS OF THE BIBLE (English 87) (5).
A study of the literary aspects of the Bible in English translation, with discussion of types and forms of literature, historical development of the Bible, the principal translations, and the influence of the Bible on English literature and on the language.
*Spring quarter.* Mr. Howell.

92. THE VARIETIES OF RELIGION IN AMERICAN LIFE AND CULTURE (5).
A study of Judaism, Roman Catholicism, and the chief forms of Protestantism; their respective beliefs, forms of worship, polity, and moral and social teachings.
*Fall quarter.* Mr. Anderson.

96. PHILOSOPHY OF RELIGION (Philosophy 96) (5). This course can be taken for credit in religion only by students majoring in religion.
An analysis will be made of the essential elements of religious thought and practice. Problems of knowledge and faith, the existence and nature of God, and the significance of religion for the individual and society will be considered.
*Spring quarter.* Mr. Poteat.

97. THE CHRISTIAN INTERPRETATION OF HISTORY (5).
The course, beginning with a study of the nature of history and the development of historiography, goes on to consider the attempts made by thinkers like Nicolas Berdyaev, Reinhold Niebuhr, Christopher Dawson, and Arnold Toynbee to arrive at a Christian interpretation of the historical process, in so far as it sheds light on the contemporary crisis.
*At times to be arranged.* Mr. Nash.

99. THE INFLUENCE OF THE BIBLE ON WESTERN THOUGHT (5). Prerequisite, Religion 28 or 30.
A historical study of the influence of the Bible on the thought and imagination of Western civilization as expressed in its philosophy, art, political theory, and literature.
*At times to be arranged.* Mr. Anderson.

## Courses for Graduates and Advanced Undergraduates

103. CHRISTIANITY AND PUBLIC EDUCATION (5). Prerequisite, Religion 28 or 30 or special permission.
This course, which is primarily but not exclusively intended for students of education, will consist of a historical and comparative study of the relations between Christianity and education since the Reformation.
*At times to be arranged.* Mr. Kidder.

121. THE BIBLICAL PERSPECTIVE (5). Prerequisite, Religion 28 or special permission.

A systematic consideration of the central themes of the Bible, such as revelation, sin, judgment, salvation, in relation to an understanding of man, society, ethical obligation, and history. The tension between the Biblical *Weltanschauung* and other world-wide views will be considered in terms of various contemporary problems.

*At times to be arranged.* Mr. Anderson.

127. ST. AUGUSTINE AND THOMAS AQUINAS (Philosophy 127) (5). Prerequisite, Philosophy 56, 122 or special permission.

A study of the philosophy of Augustine and Aquinas; their theories of God, Nature, Man, and the State; their significance for modern man.

*Spring quarter.* Mr. Cavarnos.

158. GREEK NEW TESTAMENT (Classics 158) (5). Prerequisite, Greek 21-22 or equivalent.

One or more of the Gospels will be read, with attention to the grammar, diction, and style of the New Testament writers.

*Spring quarter.* Mr. Epps.

195. THE RELATIONS BETWEEN SCIENCE AND RELIGION (5). Prerequisite, at least three courses in the natural sciences or psychology or philosophy.

This course will be concerned with the mutual influence of natural science and religion upon each other in Western civilization from 1500 to the present day. The course is intended primarily for students specializing in one of the natural sciences or philosophy or psychology.

*Spring quarter.* Mr. Nash.

## Course for Graduates

270. SOCIOLOGY OF RELIGION (Sociology 270) (5).

Analysis of tensions between the scientific, ethical, and theological study of society; the role of religion in social change; the social origins of the denominations; the sociological significance of the Reformation; "sect" and "church" in sociological theory.

*At times to be arranged.* Mr. Nash.

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## DEPARTMENT OF ROMANCE LANGUAGES

Professors: S. A. STOUDEMIRE, W. M. DEY, S. E. LEAVITT, U. T. HOLMES, N. B. ADAMS, H. R. HUSE, J. C. LYONS, *Secretary,* R. S. BOGGS, W. L. WILEY, *H. GIDUZ

Associate Professors: †H. H. STAAB, R. W. LINKER, A. G. ENGSTROM

Assistant Professors: D. H. WALTHER, J. HARDRÉ

Instructors: J. E. CARROLL, ‡W. D. CREECH, W. A. MCKNIGHT, E. F. MOYER, F. M. DUFFEY, W. E. STRICKLAND, J. MIRANDA, J. S. PATTY, E. W. BROCKMAN, L. A. SHARPE, §J. ELMENDORF, T. E. SCOTT, M.

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*Chairman of French 1, 2, 3, 4.
†Associate Professor Emeritus.
‡Absent on leave, fall and winter quarters, 1949-1950.
§Resigned, January 1, 1950.

ELSTUN, J. A. MOORE, H. L. BALLEW, E. T. DRAPER-SAVAGE, *H. L. KING, J. C. HUTCHINSON, W. A. HOVER, †C. J. ODENKIRCHEN, W. W. RITTER, H. T. STURCKEN, W. R. HEILMAN, J. H. JOHNSON, F. C. MARTIN, P. P. ROTHMAN, B. M. RUSSELL, B. A. SUMMERLIN, W. R. BRANDON, J. H. PEAK, C. L. NELSON, O. C. BEESON, W. H. BASKIN, A. F. JUDY, H. N. SEAY, J. R. PRINCE, L. J. ZAHN, D. D. STANLEY, J. C. PHARR, C. B. BROCKMANN, J. L. YOUNG

Teaching Fellows: BERNICE HEARD WADDELL, BETTY SUE TILLEY, H. R. CHEEK

Research Assistant: ROSEMARY HERMAN

## FRENCH

Students interested in having a major in French will please consult Dr. J. C. Lyons, Departmental Adviser.

Those students who plan to teach in public high schools should read the statement on pages 146-47.

### Courses for Undergraduates

1-2. ELEMENTARY FRENCH (10).
*Five hours a week, through two quarters.* Messrs. Carroll, Draper-Savage, Moyer, Strickland, Patty, Brockman, Elmendorf, Scott, Hutchinson, Hover, Odenkirchen, Brandon, Baskin, Beeson, Young, Brockmann, Prince.

NOTE: No student is permitted to take French 1, 2, 3, or 4 and Spanish 1, 2, 3, or 4 at the same time.

Attention is called to French 14-15, designed for advanced students who have fulfilled the requirements in another foreign language.

‡3-4. INTERMEDIATE FRENCH (10).
*Five hours a week, through two quarters.* Messrs. Giduz, Hardré, Carroll, Creech, Moyer, Strickland, Patty, Brockman, Elmendorf, Draper-Savage, Scott, Odenkirchen, Hutchinson, Hover, Brandon, Prince.

14-15. BEGINNING COURSE FOR ADVANCED STUDENTS (10). Elective.
*Five hours a week, fall and winter quarters.* Messrs. Huse, Hardré.

*21-22. ADVANCED FRENCH (10). Sophomore elective.
*Five hours a week, through two quarters.* Messrs. Lyons, Wiley, Linker, Engstrom, Hardré, Carroll, Moyer, Strickland, Patty, Brockman, Odenkirchen.

25. COMMERCIAL FRENCH (5). Prerequisite, Intermediate French.
(Not offered in 1949-1950.) *Spring quarter.*

50. ADVANCED COMPOSITION, SYNTAX, AND THEME WRITING (5). Prerequisite, Intermediate French.
*Winter quarter.* Mr. Linker.

51. FRENCH CONVERSATION AND COMPOSITION (5).
*Any quarter.* Messrs. Lyons, Hardré, Creech.

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*Absent on leave, fall and winter quarters, 1949-1950.
†Resigned, January 1, 1950.
‡Either of these courses may be taken separately for elective credit if the language requirement has already been satisfied.

52. FRENCH CIVILIZATION I (5). Prerequisite, French 51.
*Any quarter.* Messrs. Lyons, Hardré.

53. FRENCH CIVILIZATION II (5). Prerequisite, French 52.
French Revolution to the present.
*Spring quarter.* Mr. Hardré.

71. SURVEY OF FRENCH LITERATURE I (5).
Open to juniors and seniors.
*Fall quarter.* Mr. Engstrom.

72. SURVEY OF FRENCH LITERATURE II (5).
This course is a continuation of French 71. Open to juniors and seniors.
*Winter quarter.* Mr. Engstrom.

83. MATERIALS AND METHODS IN HIGH SCHOOL FRENCH (Education 83a) (5).
*Winter quarter.* Mr. Giduz.

84. DIRECTED TEACHING OF HIGH SCHOOL FRENCH (Education 84a) (5).
*Any quarter. Laboratory fee, $10.00.* Mr. Giduz.

97. HONORS COURSE (5).
Required of all students reading for honors in French.

## Courses for Graduates and Advanced Undergraduates

109. THE FRENCH NOVEL (5). Prerequisites, French 71, 72.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Dey.

115. FRENCH LYRIC POETRY (5). Prerequisites, French 71, 72.
*Spring quarter.* Mr. Huse.

120. FRENCH LITERATURE OF THE TWENTIETH CENTURY (5).
*Spring quarter.* Mr. Engstrom.

126. HISTORY OF THE FRENCH LANGUAGE (5). Prerequisites, French 71, 72.
*Winter quarter.* Mr. Holmes.

131. THE FRENCH DRAMA PRIOR TO 1700 (5). Prerequisites, French 71, 72.
(1949-1950 and alternate years.) *Winter quarter.* Mr. Wiley.

132. THE FRENCH DRAMA SINCE 1700 (5). Prerequisites, French 71, 72.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Wiley.

145. FRENCH PHONETICS (5). Prerequisites, French 71, 72.
*Fall quarter.* Messrs. Dey, Wiley.

171. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY I (5). Prerequisites, French 71, 72.
*Fall quarter.* Mr. Lyons.

172. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY II (5). Prerequisites, French 71, 72.
*Winter quarter.* Mr. Lyons.

181. FRENCH LITERATURE OF THE EIGHTEENTH CENTURY (5). Prerequisites, French 71, 72.
*Fall quarter.* Mr. Huse.

191. FRENCH ROMANTICISM (5). Prerequisites, French 71, 72.
*Winter quarter.* Mr. Dey.

192. FRENCH LITERATURE SINCE 1850 (5). Prerequisites, French 71, 72.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Dey.

CELTIC 105. OLD IRISH (5).
*Winter quarter.* Mr. Holmes.

CELTIC 106. OLD WELSH (5).
*One quarter.* Mr. Holmes.

## Courses for Graduates

201. MATERIALS AND METHODS OF RESEARCH (2½).
*Two and one-half hours a week, winter quarter.* Messrs. Holmes, Linker.

211. LITERARY CRITICISM IN FRANCE: THE CLASSICAL PERIOD (5).
(1949-1950 and alternate years.) *Winter quarter.* Mr. Wiley.

212. LITERARY CRITICISM IN FRANCE: THE MODERN PERIOD (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Dey.

220. VULGAR LATIN (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Holmes.

221-222-223. OLD FRENCH (15).
*Five hours a week, fall, winter, and spring quarters.* Mr. Holmes.

225. PROVENÇAL (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Holmes.

231. FRENCH SYNTAX (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Dey.

248. FRENCH LITERATURE OF THE FOURTEENTH AND FIFTEENTH CENTURIES (5). Prerequisite, French 221 or 265.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Holmes.

265-266. FRENCH LITERATURE OF THE RENAISSANCE (10).
(1950-1951 and alternate years.) *Winter and spring quarters.* Mr. Lyons.

324. ROMANCE PALEOGRAPHY (5).
*Five hours a week, winter quarter.* Mr. Linker.

331. HISTORY OF FRENCH LITERATURE PRIOR TO 1300 (5). French 221 is desired, though not prerequisite.
(1950-1951 and alternate years.) *Fall quarter.* Mr. Holmes.

370. SEMINAR IN MINOR ROMANCE TONGUES (5).
(1949-1950 and alternate years.) *Spring quarter.* Mr. Holmes.

395. RESEARCH (5).
Research in a special field under the direction of a member of the department.

# ITALIAN

## Courses for Undergraduates

51. ELEMENTARY COURSE (5). Prerequisite, intermediate French or Spanish.
*Fall quarter.* Mr. Huse.

52. MODERN ITALIAN LITERATURE (5). Prerequisite, Italian 51.
*Winter quarter.* Mr. Huse.

## Courses for Graduates and Advanced Undergraduates

131. DANTE I (5). Prerequisites, Italian 51, 52.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Huse.

132. DANTE II (5). Prerequisite, Italian 131.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Huse.

156. DANTE IN ENGLISH TRANSLATION (Comparative Literature 156) (5).
*Winter quarter.* Mr. Huse.

161. ITALIAN LITERATURE OF THE RENAISSANCE (5). Prerequisites, Italian 51 and 52.
*Spring quarter.* Mr. Huse.

181. THE ITALIAN SETTECENTO (5).
A survey of the literature of the eighteenth century in Italy, with an intensive study of Goldoni and Alfieri.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Lyons.

## Courses for Graduates

221. OLD ITALIAN (5).
(1949-1950 and alternate years.) *Fall quarter.* Mr. Holmes.

245. THE ITALIAN TRECENTO: PETRARCH AND BOCCACCIO (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Lyons.

# PORTUGUESE

## Courses for Undergraduates

51. ELEMENTARY PORTUGUESE (5). Prerequisite, intermediate French or Spanish.
*Fall quarter.* Mr. Walther.

52. READINGS IN BRAZILIAN LITERATURE (5). Prerequisite, Portuguese 51.
*Winter quarter.* Mr. Walther.

## Courses for Graduates and Advanced Undergraduates

101. MASTERPIECES OF PORTUGUESE LITERATURE (5). Prerequisite, Portuguese 52 or its equivalent.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Walther.

102. MODERN BRAZILIAN LITERATURE (5). Prerequisite, Portuguese 52 or its equivalent.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Walther.

### Course for Graduates

221. OLD PORTUGUESE (5).
(1950-1951 and alternate years.) *Fall quarter.* Mr. Holmes.

## SPANISH

Students interested in having a major in Spanish will please consult Dr. S. A. Stoudemire, Departmental Adviser.

Those students who plan to teach in public high schools should read the statement on pages 146-47.

### Courses for Undergraduates

1-2. ELEMENTARY SPANISH (10).
*Five hours a week, through two quarters.* Messrs. McKnight, Duffey, Miranda, Sharpe, Elstun, Moore, Ballew, King, Sturcken, Ritter, Heilman, Martin, Johnson, Russell, Summerlin, Rothman, Pharr, Stanley, Zahn, Seay, Judy, Nelson, Peak, Cheek.

NOTE: No student is permitted to take Spanish 1, 2, 3, or 4, and French 1, 2, 3, or 4 at the same time.

Attention is called to Spanish 14-15, designed for advanced students who have fulfilled the requirements in another foreign language.

*3-4. INTERMEDIATE SPANISH (10).
*Five hours a week, through two quarters.* Messrs. Adams, Walther, McKnight, Duffey, Miranda, Sharpe, Ballew, King, Ritter, Martin, Russell, Sturcken, Peak, Heilman, Moore, Summerlin, Johnson.

14-15. BEGINNING COURSE FOR ADVANCED STUDENTS (10). Elective.
*Five hours a week, fall and winter quarters.* Messrs. Stoudemire, McKnight.

*21-22. ADVANCED SPANISH (10).
Sophomore elective.
*Five hours a week, through two quarters.* Messrs. Leavitt, Adams, Stoudemire, McKnight, Duffey, Walther, King, Sharpe, Elstun, Ballew, Russell.

25. COMMERCIAL SPANISH (5). Prerequisite, intermediate Spanish.
*Spring quarter.* Mr. McKnight.

50. ADVANCED COMPOSITION, SYNTAX, AND THEME WRITING (5). Prerequisite, intermediate Spanish.
*Fall quarter.* Messrs. Stoudemire, McKnight.

51. SPANISH CONVERSATION AND COMPOSITION (5).
*Any quarter.* Mr. Miranda.

52. SPANISH CIVILIZATION (5). Prerequisite, Spanish 51.
*Any quarter.* Mr. Miranda.

53. LATIN AMERICAN CIVILIZATION (5). Prerequisite, Spanish 51.
A survey in Spanish of the history and culture of Latin America.
*Spring quarter.* Mr. Walther.

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*Either of these courses may be taken separately for elective credit if the language requirement has already been satisfied.

71. SURVEY OF SPANISH LITERATURE TO 1700 (5).
Open to juniors and seniors.
*Fall quarter.* Mr. Stoudemire.

72. SURVEY OF SPANISH LITERATURE SINCE 1700 (5).
This course is a continuation of Spanish 71. Open to juniors and seniors.
*Winter quarter.* Mr. Stoudemire.

73. SURVEY OF SPANISH AMERICAN LITERATURE (5). Prerequisite, Spanish 71-72. Open to juniors and seniors.
*Spring quarter.* Messrs. Leavitt, Walther.

83. MATERIALS AND METHODS IN HIGH SCHOOL SPANISH (Education 83b) (5).
*Winter quarter.* Mr. Giduz.

84. DIRECTED TEACHING OF HIGH SCHOOL SPANISH (Education 84b) (5).
*Any quarter. Laboratory fee, $10.00.* Mr. Giduz.

97. HONORS COURSE (5).
Required of all students reading for honors in Spanish.

## Courses for Graduates and Advanced Undergraduates

109. EARLY SPANISH PROSE FICTION (5). Prerequisites, Spanish 71, 72.
(1950-1951 and alternate years.) *Fall quarter.* Mr. Adams.

110. THE SPANISH NOVEL, 1605-1898 (5). Prerequisites, Spanish 71, 72.
(1950-1951 and alternate years.) *Winter quarter.* Mr. Adams.

111. MODERN SPANISH NOVELISTS (5). Prerequisites, Spanish 71, 72.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Adams.

112. THE NOVEL IN SPANISH AMERICA (5). Prerequisites, Spanish 71, 72.
(1949-1950 and alternate years.) *Spring quarter.* Mr. Leavitt.

115. EARLY LYRIC POETRY (5). Prerequisites, Spanish 71, 72.
(1949-1950 and alternate years.) *Fall quarter.* Mr. Adams.

116. MODERN LYRIC POETRY (5). Prerequisites, Spanish 71, 72.
(1949-1950 and alternate years.) *Winter quarter.* Mr. Adams.

117. CERVANTES (5).
*Spring quarter.* Mr. Stoudemire.

131. LOPE DE VEGA AND HIS CONTEMPORARIES (5). Prerequisites, Spanish 71, 72.
*Fall quarter.* Mr. Leavitt.

132. CALDERÓN AND HIS CONTEMPORARIES (5). Prerequisites, Spanish 71, 72.
*Winter quarter.* Mr. Leavitt.

134. SPANISH DRAMA OF THE NINETEENTH CENTURY (5). Prerequisites, Spanish 71, 72.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Leavitt.

135. MODERN SPANISH DRAMA (5). Prerequisites, Spanish 71, 72.
(1951-1952 and alternate years.) *Spring quarter.* Mr. Leavitt.

145. SPANISH PHONETICS (5). Prerequisites, Spanish 71, 72.
*Spring quarter.* Mr. Boggs.

### Courses for Graduates

201. BIBLIOGRAPHY AND METHODOLOGY (5). Required of all candidates for the A.M. and Ph.D. degrees.
*Fall quarter.* Mr. Stoudemire.

221-222. OLD SPANISH (10).
*Five hours a week, fall and winter quarters.* Mr. Boggs.

241. STUDIES IN SPANISH-AMERICAN LITERATURE (5).
(1950-1951 and alternate years.) *Spring quarter.* Mr. Leavitt.

291. EARLY SPANISH LITERATURE (5). Prerequisite, Spanish 221-222.
*Spring quarter.* Mr. Boggs.

393. SPANISH ROMANTICISM (5). Seminar Course.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Adams.

395. RESEARCH (5).
Research in a special field under the direction of a member of the department.

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## DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

Professors: H. W. ODUM, H. D. MEYER, S. H. HOBBS, JR., R. B. VANCE, G. B. JOHNSON, KATHARINE JOCHER, G. W. BLACKWELL, L. M. BROOKS, WILEY B. SANDERS, J. P. GILLIN, N. J. DEMERATH, REUBEN HILL, E. W. NOLAND, *L. P. CRESPI
Associate Professors: HARRIET L. HERRING, †D. O. PRICE
Instructors: ERNEST Q. CAMPBELL, JOFFRE L. COE
Teaching Fellow: THEODORE W. WIRTHS
Graduate Assistants: WINFRED L. GODWIN, DAVID LANDY

*Undergraduate major in sociology:* Sociology 51 and 52, or Sociology 51 and Anthropology 41‡, usually taken in the sophomore year, and six elective courses in general sociology and rural sociology. If courses equivalent to Sociology 51 and 52, or Anthropology 41, have been successfully completed elsewhere with a grade of C or better, only six additional courses are required. A student majoring in sociology may take as many as three courses in anthropology as an allied field. Double-listed courses must count in the field of the major.

Through proper selection of courses in the major, allied, and non-divisional fields, students may prepare for positions in public school teaching of social studies, in personnel work, in recreation, as

*Joins the faculty in September, 1950.
†On leave spring quarter, 1949-1950, Harvard University.
‡Beginning with the academic year 1950-1951, the requirement will be Sociology 51 and Anthropology 41.

social case work aides, and in other related lines of endeavor; or for graduate study in sociology, rural sociology, social work, personnel, and other specialties.

*Undergraduate major in anthropology:* Anthropology 41 and Sociology 51, usually taken in the sophomore year, and six elective courses in anthropology. If courses equivalent to Anthropology 41 and Sociology 51 have been successfully completed elsewhere with a grade of C or better, only six additional courses in anthropology are required. A student majoring in anthropology may take as many as three courses in sociology as an allied field. Double-listed courses must count in the field of the major.

Majors in anthropology can prepare for positions as museum assistants, as research assistants in cultural anthropology and prehistoric archaeology, and for other lines of endeavor, as well as for graduate work in anthropology.

*Undergraduate split major in sociology-anthropology:* Sociology 51 and Anthropology 41, usually taken in the sophomore year, and three additional courses in sociology and three additional courses in anthropology. This split major is designed primarily for prospective public school teachers in the social studies and for students interested in a broad liberal education with no special vocational purpose.

*Electives:* Students desiring one or more undergraduate elective courses in the department may take Sociology 51, 52, 53, 62, or Anthropology 41. Sociology 51 or its equivalent is prerequisite for all other courses in sociology except where otherwise indicated. Anthropology 41 or its equivalent is prerequisite for all other courses in anthropology except where otherwise indicated.

*Graduate degrees:* Except in special cases, the following courses or their equivalents are required for those majoring in sociology for a graduate degree: 152, History of Social Thought; 191, Social Statistics; and 208, Methods in Social Research. Candidates for the doctorate should also have Sociology 212, American Sociologists; and Sociology 262, European Sociological Theory.

Candidates for the M.A. or Ph.D. degrees in general sociology may minor in rural sociology, anthropology, any of the other social sciences or related fields such as statistics, planning, public health, or social work. A split minor in two fields for the Ph.D. in sociology is possible with special permission of the Graduate School.

The M.A. degree in rural sociology is offered and candidates for this degree may minor in general sociology, anthropology, or any of the other social sciences.

The M.A. degree in anthropology is offered and candidates for this degree may minor in general sociology, rural sociology, or any of the other social sciences.

Students in other departments may take a minor for the M.A. or Ph.D. degrees in general sociology, rural sociology, or anthropology.

Courses in rural sociology and anthropology are grouped separately following the courses in general sociology, with anthropology courses carrying the designation "Anthropology" on registration forms.

## COURSES IN GENERAL SOCIOLOGY

### Courses for Undergraduates

51. INTRODUCTION TO SOCIOLOGY (5).

An analysis of the natural, cultural, and institutional bases of society; the processes and trends underlying problems and adjustments.

*Any quarter. Materials fee, $1.00.* Messrs. Brooks, Vance, Blackwell, Noland, Price, Campbell, Godwin.

52. SOCIAL PROBLEMS (5).

Introductory course in social problems with primary emphasis on positive features and secondary consideration to social pathology—background of social problems, social change, group conflict, social attitudes, social adjustment, and proposed ways out.

*Any quarter. Materials fee, $1.00.* Messrs. Meyer, Wirths.

56. HOW TO STUDY SOCIETY (5). Prerequisites, three courses in sociology.

An introduction to the quantitative methods of studying society with special emphasis upon the tools of research in sociology; examination and analysis of current research projects, governmental and private.

(Not offered in 1949-1950.) *Spring quarter.*

62. MARRIAGE (5). No prerequisite.

Analysis of courtship, marriage, and family relationships. Integration of the social sciences, biology, psychology, and religion along with literature and the arts as they each contribute to the understanding of current marital and familial problems.

*Any quarter.* Messrs. Hill, Nash.

95, 96, 97. HONORS READING COURSES (5 each quarter). Prerequisite, for Honors Program, approval of the chairman of the department.

Special reading for honors in a selected field under the direction of a member of the department. A student may take only two courses in the Honors Program.

*Any quarter.* Members of the department.

## Courses for Graduates and Advanced Undergraduates

122. CULTURAL ANTHROPOLOGY (Anthropology 122) (5).
A systematic survey of the customs and modes of life of mankind based on scientific explanation of the ways of culture. Special attention to relating the materials of comparative ethnology to problems of cultural adjustment in our own society.
*Winter quarter. Materials fee, $1.00.* Messrs. Gillin, Johnson.

125. THE NEGRO (Anthropology 125) (5).
A study of the American Negro, with particular reference to the South; the historical and cultural backgrounds of the Negro in Africa and in America; development since emancipation; biracial system; problems of race relations.
*Fall or winter quarter.* Mr. Johnson.

128. FOLK CULTURES IN THE MODERN WORLD (Anthropology 128) (5).
The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.
(1949-1950 and alternate years.) *Fall quarter. Materials fee, $1.00.* Mr. Gillin.

133. INTRODUCTION TO SOCIAL PSYCHOLOGY (Psychology 133) (5). Prerequisites, Psychology 24 and 25.
Social groupings; dynamics of person-to-person relations.
*Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $1.00.* Mr. Crespi.

142. FOUNDATIONS OF SOCIAL SCIENCES (Philosophy 142) (5). Prerequisites, two courses in Philosophy, Psychology, or Sociology.
An attempt to establish an approach to the social sciences based on the notion of directed behavior. The course seeks to construct a theoretical framework for modern social science and a possible science of man.
*Spring quarter.* Mr. Kattsoff.

152. HISTORY OF SOCIAL THOUGHT (5). Prerequisite, introductory course in one of the social sciences or philosophy.
A survey of social thought antecedent to the development of scientific sociological theory, paralleling the development of Western and Oriental society and culture. Leading figures from Confucius to Marx treated historically and comparatively. Required of all candidates for graduate degrees in sociology.
*Winter quarter.* Messrs. Vance, Demerath.

153. SOCIAL STRUCTURE (5). Prerequisite, Sociology 152.
Social structure and stratification are analyzed in terms of class, status, prestige, rank, and function. Type societies and institutions are studied to determine (1) the distribution of authority, (2) the integration of functions, and (3) the hierarchy of rank. Special attention is given to the social role of the elite, bureaucracies, and professional and middle classes.
(1950-1951 and alternate years.) *Winter quarter.* Mr. Vance.

154. CONTEMPORARY SOCIETY (5). Prerequisites, three courses in sociology.
The study of the cultural evolution of society from the viewpoint of the folk regional development: folkways, stateways, geographic factors, regions, states, modern technology and change, the application to contemporary American society.
(1950-1951 and alternate years.) *Fall quarter.* Mr. Odum.

155. SOCIAL CHANGE AND SOCIAL PROGRESS (5). Prerequisites, three courses in sociology.

Review of the theories and philosophy of social progress; social trends and social change; objective measuring scales of change; objective appraisal of the various aspects of material progress, social progress, and social regress.

(1949-1950 and alternate years.) *Fall quarter.* Mr. Odum.

160. THE FIELD OF SOCIAL WORK (5).

An orientation course based on the description and analysis of the historical development of social work and the operation in contemporary society of the many specialized social work services.

*Winter quarter.* Mr. Fink.

161. SOCIOLOGY OF THE FAMILY (5).

Analysis of contemporary family institutions as they vary in historical time and social space as a background for interpreting American family life in its societal contexts.

(1949-1950 and alternate years.) *Winter quarter.* Mr. Hill.

162. DYNAMICS OF FAMILY DEVELOPMENT (5). Prerequisites, Sociology 51 and general psychology.

Analysis of the natural history of families, how they form, function, and grow to maturity. Focus on the developmental growth of children and parents in interaction in seven stages of the family life cycle—from engagement planning to family dissolution.

(1950-1951 and alternate years.) *Winter quarter.* Mr. Hill.

167. HOUSING AND COMMUNITY DEVELOPMENT (5). Prerequisites, Sociology 51 and Economics 31-32 or Economics 61.

Housing problems and policies in Europe and the United States in relation to family living, community, the institution of property and contract, and the housebuilding process. Housing as a field for joint social science and architectural study. Field trips.

*Spring quarter. Materials fee, $1.00.* Mr. Demerath.

168. THE CITY (5).

The city as a social phenomenon in various cultures. Analysis of urban trends, characteristics and functions of cities with special reference to ecology and social organization. Sociological elements in urban planning and guided development.

*Fall quarter. Materials fee, $1.00.* Mr. Demerath.

169. THE INDUSTRIAL COMMUNITY (5).

Development of the industrial community since the Industrial Revolution; effect of changing conditions and differences in surrounding society; paternalism, labor laws, economic and labor problems as they affect the industrial community.

*Winter quarter.* Miss Herring.

170. INDUSTRIAL SOCIOLOGY (5).

A study of human relations in industry from the standpoint of the sociological and socio-psychological factors involved. The basic human problems in an industrial situation and the methods of approaching them; status and role in the work situation; sources of friction and problems of maintaining morale and cooperation; structural characteristics of industrial hierarchies; interrelations between industry and community.

*Winter quarter.* Mr. Noland.

171. EDUCATIONAL SOCIOLOGY (5).

Education as a process of social control and achievement. The social resources of the school and other educational resources. Social problems of the teacher.

(Not offered in 1949-1950.) *Winter quarter. Materials fee, $1.00.* Mr. Blackwell.

173. COMMUNITY RECREATION (5).

Foundations of organized recreation; backgrounds and theories; objectives and principles; social and economic factors; public, private, and commercial interests; recreation and the social institutions—family, church, school, and community; recreation and camping; programs for the defective, delinquent, and dependent; youth serving agencies and industrial interests, international aspects; inequalities and future opportunities.

*Fall quarter.* Mr. Meyer.

174. COMMUNITY ORGANIZATION (5).

Within the theoretical framework of structure-function, the course analyzes dimensions of community, variation and change, integration and disorganization, techniques and principles of community development.

*Spring quarter. Materials fee, $1.00.* Mr. Blackwell.

176. RECREATION PROGRAM PLANNING (5).

An investigation of research possibilities; surveys and studies; immediate and long-range planning; the fields of activity; types, correlations, and program activities; principles and methods of program planning; schedules according to time basis, special activities and feature events; areas and facilities; types and functions; equipment and maintenance.

*Winter quarter.* Mr. Meyer.

180. STATE AND REGIONAL PROBLEMS AND PLANNING (5).

A survey of the field of state and regional problems and planning with special reference to the basic theory of regionalism. Includes case studies of selected state and regional planning programs and agencies.

*Winter quarter.* Messrs. Odum, Blackwell.

181. REGIONAL SOCIOLOGY OF THE SOUTH (5).

A sociological analysis of the southern region of the United States. Emphasis on facts, factors, and policies pertaining to geography, population, and culture; resources and waste; social institutions and planning.

*Fall quarter. Materials fee, $1.00.* Mr. Blackwell.

182. THE COOPERATIVE MOVEMENT (5).

The sociology of cooperation; analysis and interpretation with emphasis upon the origins and functioning of cooperation in nations and regions, and in connection with the basic social institutions.

(1950-1951 and alternate years.) *Spring quarter. Materials fee, $1.00.* Mr. Brooks.

183. SOCIAL CONTROL AND PUBLIC OPINION (5).

Public opinion as the basis of social control; psychological, cultural, and institutional factors conditioning the management of public opinion. Special emphasis on techniques of social persuasion and control.

*Winter quarter.* Mr. Brooks.

186. POPULATION (5).

A study of problems of quality and quantity of population including theories of population increase, and problems of composition, distribution, differential fertility, population pressure, and internal migration.

*Fall quarter. Materials fee, $1.00.* Mr. Vance.

191. SOCIAL STATISTICS (5). Prerequisites, three courses in sociology.

The topics usually covered in an elementary course in statistics are treated with emphasis on those best adapted to sociological research. Required of all candidates for graduate degrees in sociology.

*Four lecture and four laboratory hours a week, fall quarter. Laboratory fee, $2.00.* Mr. Price.

192. CRIMINOLOGY (5).

The principles of criminology and penology with emphasis on psycho-sociological factors; study of historical and contemporary theory and practice.

*Fall quarter.* Mr. Brooks.

193. SOCIAL PATHOLOGY (5).

Emphasis on poverty and relief with coordinate study of delinquency, vagrancy, prostitution, alcoholism, crime, mental defects, and other pathological conditions. Analysis of therapeutic measures. Field trips to county and state institutions.

(Not offered in 1949-1950.) *Fall quarter.* Mr. Meyer.

195. SOCIAL INSTITUTIONS (5). Prerequisites, three courses in sociology.

A comprehensive and systematic study of the essential components of social institutions; their origin and development; the inter-play between the individual and institutions; the factors involved in the progressive adaptability of institutions.

(Not offered in 1949-1950.) *Spring quarter.* Mr. Blackwell.

196. SAMPLING AND SURVEY TECHNIQUES (Mathematical Statistics 106) (5). Prerequisites, one course in statistics or differential and integral calculus.

Lectures on the theory of sampling will cover combinations and permutations, summation notations, rudimentary probability, variances of sample design, variability of response, and optimum allocation of financial and personnel resources in surveys, laboratory and field work in the planning and execution of a survey, including construction and use of questionnaire and interview-schedule, interviewing techniques.

*Four lecture and two laboratory hours a week, fall quarter.* Messrs. Price, Bose.

197. POPULATION STATISTICS (5).

Training in techniques for quantitative research with population data. Description of composition characteristics, making of population estimates, computation and standardization of birth and death rates, construction and application of life tables, measurement of migration.

*Four lecture and four laboratory hours a week, fall quarter. Laboratory fee, $2.00.* Mr. Price.

198. DIAGNOSIS AND TREATMENT OF JUVENILE DELINQUENCY (5).

A non-technical analysis of the causation, prevention, and treatment of juvenile delinquency. Primarily for seniors and graduate students majoring in sociology.

*Fall quarter. Materials fee, $1.00.* Mr. Sanders.

199. MODERN PENOLOGY (5). Prerequisite, Sociology 192 or equivalent.

Specialized study of trends, legislation, experiments, and accomplishments in correctional programs. Such topics as parole, classification, and personnel will be emphasized.

(1949-1950 and alternate years.) *Spring quarter.* Mr. Brooks.

## Courses for Graduates

208. METHODS IN SOCIAL RESEARCH (5).

An analysis of social research planned to give the student acquaintance with the scientific method and the interrelationship of the social sciences, the role of theory in scientific research, the training of research personnel, and methods of procedure in working with source materials. Required of first-year graduate students in sociology.

*Fall quarter. Materials fee, $1.00.* Messrs. Odum, Blackwell, Miss Jocher.

210. FOLK SOCIOLOGY (5).

An approach to a new general sociology, utilizing the folk-regional society and regionalism as a study of natural societal evolution in contrast with modern artificial society and technology. Contributions are sought to sound social theory as it relates to the understanding of cultures and the direction of civilization.

*Spring quarter.* Mr. Odum.

212. AMERICAN SOCIOLOGISTS (5).

An analysis of the work and personalities of living American sociologists projected on the background of the sociology of the earlier American sociologists. Required of all candidates for the Ph.D. degree in sociology.

*Winter quarter.* Mr. Odum.

215. EXPERIMENTAL SOCIOLOGY (5). Prerequisite, Sociology 191 or equivalent plus some knowledge of analysis of covariance.

A study of the experiment as a research method in sociology. The choice and statement of hypotheses suitable for testing with social experiments, methods of measuring variables and of controlling extraneous variables, types of stimuli, measurement of results, accuracy and generality of conclusions.

(Not offered in 1949-1950.) *Spring quarter. Materials fee, $1.00.* Mr. Price.

218. HUMAN ECOLOGY (SEMINAR) (5).

Consideration of theory and research emerging around the concept of human ecology. A review of the background of human ecology is followed by readings, reports, and research on its contemporary development.

(1949-1950 and alternate years.) *Winter quarter. Materials fee, $1.00.* Mr. Vance.

220. THEORIES OF CULTURE (Anthropology 220) (5).

A systematic survey of the history of theory in cultural anthropology leading to the development of a system of operational principles which the student may apply in his own field work and further studies involving cultural problems.

(1949-1950 and alternate years.) *Winter quarter. Materials fee, $1.00.* Mr. Gillin.

229. CULTURE AND PERSONALITY (Anthropology 229) (5).

A scientific analysis of the influence of cultural forms on the individual in our own and other societies, considered from the anthropological, psychological, and clinical points of view.

(1949-1950 and alternate years.) *Winter quarter. Materials fee, $1.00.* Mr. Gillin.

230. RACE AND CULTURE CONTACTS (Anthropology 230) (5).

This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

233. METHODS OF INVESTIGATION IN SOCIAL PSYCHOLOGY (Psychology 233) (5).

Analysis of selected research problems from the standpoint of theory and techniques; intensive study of public opinion research.

(Not offered in 1949-1950.) *Spring quarter.* Mr. Crespi.

240. SOCIAL RESEARCH IN INDUSTRIAL RELATIONS (5). Prerequisite, Sociology 170 or Economics 191.

A critical appraisal of recent and current research in human relations in industry with emphasis upon methodology and research opportunities. Systematic analysis of theories and procedures of sociology, anthropology, and social psychology bearing upon research in labor and industrial relations. Analysis of industrial research from the standpoint of an appropriate conceptual framework, financial support, public relations, and research techniques.

*Spring quarter.* Mr. Noland.

253. ADVANCED SOCIAL STATISTICS (5). Prerequisite, Sociology 191.

Multiple and partial correlation, analysis of variance and covariance, sampling, and other topics applicable to specific research projects of the students.

*Four lecture and four laboratory hours a week, spring quarter. Laboratory fee, $2.00.* Mr. Price.

262. EUROPEAN SOCIOLOGICAL THEORY (SEMINAR) (5).

Social organization, change, and social action as interpreted by Pareto, Marx, Durkheim, Max Weber, Karl Mannheim, and other European theorists, together with consideration of their influence currently in the United States. Required of all candidates for the Ph.D. degree in sociology.

*Fall quarter.* Mr. Demerath.

270. SOCIOLOGY OF RELIGION (Religion 270) (5).

Analysis of tensions between the scientific, ethical, and theological study of society; the role of religion in social change; the social origins of the denominations; the sociological significance of the Reformation; "sect" and "church" in sociological theory.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Nash.

276. ADMINISTRATION OF RECREATION (5).

Analysis of recreation from the standpoint of organization; administration; finances; budget; reports and records; leadership and training; legislation; publicity and public relations; coordination of community resources; program operation.

*Spring quarter.* Mr. Meyer.

301, 302, 303. GRADUATE RESEARCH SEMINAR (5 each quarter). Registration by permission of instructor.

Advanced reading, library research or field research on a selected topic under guidance of the instructor.

*Any quarter.* Members of the department.

327, 328, 329. GRADUATE RESEARCH SEMINAR (5 each quarter). Registration by permission of the instructor.

Research on selected topics.

*Any quarter.* Mr. Odum.

331. THE FAMILY AND ITS SOCIAL FUNCTIONS (5).

Graduate research seminar. An interpretation of important contributions of social thought concerning marriage and the family from Plato to the present.

(Not offered in 1949-1950.) *Winter quarter.* Mr. Hill.

333. EDUCATION FOR MARRIAGE AND FAMILY LIFE (5).
A graduate seminar on educational programs for the conservation of marriage and the family. Students electing this seminar should audit Sociology 62 for observation of content and techniques in a course designed as preparation for marriage and family life.
(Not offered in 1949-1950.) *Spring quarter.* Mr. Hill.

334. CRITIQUE OF RESEARCH IN MARRIAGE AND THE FAMILY (5).
This seminar reviews the basic conceptual frameworks used in family research in the past; identifies changing emphasis in family study; and evaluates current studies in the major fields of family research.
*Spring quarter.* Mr. Hill.

341. SEMINAR (5).
Individual research (thesis or dissertation) in a selected field under the direction of a member of the department.
*Any quarter.*

## *COURSES IN RURAL SOCIOLOGY

### Courses for Undergraduates

53. RURAL SOCIAL ECONOMICS (5). No prerequisite.
A general introductory course in the principles and problems of rural social economics, with attention to the relationship between economic and social conditions, especially in the South.
*Fall quarter.* Mr. Hobbs.

54. RURAL COOPERATION (5).
Historical background of rural cooperation abroad and at home; principles of cooperation; fields of rural cooperative activity, both economic and social. Lectures and research.
(Not offered in 1949-1950.) *Winter quarter.* Mr. Hobbs.

### Courses for Graduates and Advanced Undergraduates

101. NORTH CAROLINA: ECONOMIC AND SOCIAL (5).
This course is designed to familiarize the student with North Carolina: population, agriculture, resources, social life, economic development, industry, wealth, taxation, education, public welfare.
*Fall quarter.* Mr. Hobbs.

102. RURAL SOCIOLOGY (5).
Topics include rural society and rural sociology, socio-economic aspects of agriculture, conditions and movements of rural population, rural social institutions and agencies, bio-social conditions, socio-cultural conditions, rural-urban relations.
*Winter quarter.* Mr. Hobbs.

103. HISTORY OF AGRICULTURE AND RURAL INSTITUTIONS (5).
This course traces the development of agriculture from its earliest beginnings to the present: early developments; Greece and Rome; later agriculture in Europe; American agricultural institutions.
*Spring quarter.* Mr. Hobbs.

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*Courses in rural sociology carry regular designation "Sociology" on registration forms. Sociology 174, 181, and 218 may be counted as rural sociology courses in a graduate program. Additional graduate courses in rural sociology are available at North Carolina State College in Raleigh.

110. RURAL LAND PLANNING AND LAND ECONOMICS (5). Prerequisite or corequisite, general economics or Sociology 53.

A course covering the broad field of land economics, with special attention to utilization and conservation of farm and forest land resources in the United States.

*Winter quarter.* Mr. Hobbs.

166. THE RURAL COMMUNITY (5).

The rural community as a sociological group, evolution of the rural community, village-community economy, social institutions, social organization, social control, sociological significance, the future of the rural community.

*Spring quarter.* Mr. Hobbs.

### Courses for Graduates

311, 312, 313. RURAL SOCIAL PROBLEMS (5 each quarter). Prerequisites, approved courses in general sociology and rural sociology and permission of instructor.

Research, seminars, and field investigations in selected topics from the following: rural social problems; rural social surveys, research techniques and field work; rural social statistics, interpretation and use; rural social engineering.

*Any quarter.* Mr. Hobbs; assistant.

## *COURSES IN ANTHROPOLOGY

### Courses for Undergraduates

41. GENERAL ANTHROPOLOGY (5).

A basic introduction to man as a species and as a producer of customs and culture. The evolution of mankind, fossil man, modern varieties and races, and human capabilities. The fundamental cultural developments of human history with a general study of the functioning principles of culture.

*Any quarter. Materials fee, $1.00.* Messrs. Gillin, Johnson, Landy.

74. ARCHAEOLOGY OF NORTH AMERICA (5).

A study of the growth of American Indian cultures north of the Rio Grande as interpreted by archaeological research. Special emphasis on the prehistory of North Carolina and the eastern woodlands.

*Winter quarter. Laboratory fee, $1.00.* Mr. Coe.

79. RESEARCH METHODS IN ARCHAEOLOGY (5).

A study of the basic principles underlying archaeological study of prehistoric sites, with discussion of methods employed at various outstanding excavations; a study of laboratory methods, problems of analysis and interpretation, integration, and application to cultural history. Field trips and laboratory work.

*Spring quarter. Laboratory fee, $3.00.* Mr. Coe.

95, 96, 97. HONORS READING COURSES (5 each quarter). Prerequisite, for Honors Program, approval of the chairman of the department.

Special reading for honors in a selected field under the direction of a member of the department. A student may take only two courses in the Honors Program.

*Any quarter.* Members of the department.

*As indicated, certain courses in anthropology also carry credit in general sociology.

## Courses for Graduates and Advanced Undergraduates

122. CULTURAL ANTHROPOLOGY (Sociology 122) (5).
A systematic survey of the customs and modes of life of mankind based on scientific explanation of the ways of culture. Special attention to relating the materials of comparative ethnology to problems of cultural adjustment in our own society.
*Winter quarter. Materials fee, $1.00.* Messrs. Gillin, Johnson.

125. THE NEGRO (Sociology 125) (5).
A study of the American Negro, with particular reference to the South; the historical and cultural backgrounds of the Negro in Africa and in America; development since emancipation; biracial system; problems of race relations.
*Fall or winter quarter.* Mr. Johnson.

126. RACES AND PEOPLES OF AFRICA (5).
A survey of the native peoples and cultures of Africa, with special emphasis on the Negroid peoples south of the Sahara and with some attention to the African background of the American Negro.
(1949-1950 and alternate years.) *Spring quarter. Materials fee, $1.00.* Mr. Johnson.

127. NATIVE PEOPLES AND CULTURES OF LATIN AMERICA (5).
An approach to the understanding of modern Latin America in ethnological terms. Since most of the folk cultures of Latin America are blends of colonial Iberian, modern European, and indigenous elements, consideration is given to all three sources, with emphasis upon the indigenous background.
(1950-1951 and alternate years.) *Winter quarter. Materials fee, $1.00.* Mr. Gillin.

128. FOLK CULTURES IN THE MODERN WORLD. (Sociology 128) (5).
The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.
(1949-1950 and alternate years.) *Fall quarter. Materials fee, $1.00.* Mr. Gillin.

130. INDIANS OF NORTH AMERICA (5).
A descriptive study of the cultural areas of North America at the time of European contact. Special emphasis is placed on the major tribes of the Southeast.
*Fall quarter. Laboratory fee, $1.00.* Messrs. Johnson, Coe.

185. INTRODUCTION TO FOLKLORE (Folklore 185) (5).
Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.
*Fall quarter.* Mr. Boggs.

## Courses for Graduates

220. THEORIES OF CULTURE (Sociology 220) (5).
A systematic survey of the history of theory in cultural anthropology leading to the development of a system of operational principles which the student may apply in his own field work and further studies involving cultural problems.
(1949-1950 and alternate years.) *Spring quarter. Materials fee, $1.00.* Mr. Gillin.

229. CULTURE AND PERSONALITY (Sociology 229) (5).
A scientific analysis of the influence of cultural forms on the individual in our own and other societies, considered from the anthropological, psychological, and clinical points of view.
(1949-1950 and alternate years.) *Winter quarter. Materials fee, $1.00.* Mr. Gillin.

230. RACE AND CULTURE CONTACTS (Sociology 230) (5).
This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

321, 322, 323. SEMINAR IN ANTHROPOLOGY (5 each quarter). Prerequisites, Anthropology 122 and permission of the instructor.
Advanced reading, library research, field research in anthropology under guidance of the instructor.
*Any quarter.* Messrs. Gillin, Johnson.

341. SEMINAR (5).
Individual research (thesis or dissertation) in a selected field under the direction of a member of the department.
*Any quarter.*

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## DEPARTMENT OF ZOOLOGY

Professors: D. P. COSTELLO, R. E. COKER, C. D. BEERS
Associate Professors: W. L. ENGELS, MAURICE WHITTINGHILL, C. S. JONES, D. G. FREY
Assistant Professor: H. E. LEHMAN
Instructors: C. B. BLAIR, JR., H. C. YEATMAN
Part-time Instructor: E. E. JONES, JR.
Teaching Fellow: C. W. HINTON, JR.
Research Associate: CATHERINE HENLEY
Graduate Assistants: LOIS T. HARRIS, NORMA SUE SLIGH, MARGARET M. STEWART, CORDELIA ANNE VINSON, LILLIAN M. YOUNGS, LAVINIA C. YOUNT, JAMES L. YOUNT

*Requirements for Undergraduate Major:* For A.B. with major in zoology, there are required six courses in zoology of the level of 41 or higher, or five in zoology with Botany 41. Six courses should be taken in other departments of the Division of the Natural Sciences including two courses in chemistry and two in physics, if these have not been taken in the General College. Courses necessary to complete the required number of hours for graduation should be taken in departments outside the Division of Natural Sciences. At least three courses should be taken in one department other than zoology either within or without the division.

Those students who plan to teach in public high schools should read the statement on pages 146-47.

With the recommendation of the department and the approval of the Administrative Board of the Graduate School, special courses and

direction of graduate studies may be offered by members of the staff of the Institute of Fisheries Research. (See page 399.)

## Courses for Undergraduates

1. ELEMENTS OF HUMAN AND ANIMAL BIOLOGY (5). Freshman elective.

Zoology 1 and Botany 1 are offered for students who do not plan to take higher courses in the natural sciences and cannot be used as prerequisites for the latter. For introductory or pre-professional training refer to Zoology 41, 42 and Botany 41, 42.

Basic similarities of all living organisms; organ systems and their physiology; embryology, genetics, organic evolution, ecology, survey of the major phyla.

*Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00.* Messrs. Lehman, Blair, Yeatman; assistants.

41. INTRODUCTORY VERTEBRATE ZOOLOGY (6).

Zoology 41 and 42 are planned to serve general cultural needs for the field of zoology. They also serve to meet in part the usual pre-professional requirements.

Fundamentals of vertebrate anatomy, physiology, histology, embryology, classification, and homology.

*Four lecture and four laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $7.50.* Messrs. C. S. Jones, E. E. Jones, Jr.; assistants.

42. INTRODUCTORY INVERTEBRATE ZOOLOGY AND PRINCIPLES (6). Prerequisite, Zoology 41.

Structure, function, relationships, and significance of invertebrate animals; and the general zoological principles of mitosis, meiosis, genetics, classification, and organic evolution.

*Four lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, $7.50.* Mr. Frey; assistants.

46. OCEANOGRAPHY (OCEANIC ECOLOGY) (5).

The course as now offered is experimental. Specific prerequisites are not set up; but enrollment is limited by consent of the instructor and the Dean of the College of Arts and Sciences, who must be satisfied as to the interest and the background of the student.

An introduction to the study of the seas with special reference to the conditions of biological productivity and fisheries. The history of oceanography; the chemical, physical, topographic, and general geographic features, and the plan of circulation, as such conditions affect life in the sea and the yield of useful products.

*Four hours of lectures and reading and two hours of laboratory a week, fall or spring quarter.* Mr. Coker.

NOTE: Courses in Directed Teaching in High School Science and in Materials and Methods of Teaching High School Science will be found under the School of Education.

## Courses for Graduates and Advanced Undergraduates

103. COMPARATIVE VERTEBRATE ANATOMY (6). Prerequisites, Zoology 41 and 42.

Lectures on the structure and evolutionary history of the chief organ systems of vertebrates. Dissections of amphioxus, petromyzon, dogfish head, necturus, and cat.

*Two lecture and nine laboratory hours a week, fall and winter quarters. Laboratory fee, $12.50.* Messrs. Engels, Yeatman; assistants.

104. VERTEBRATE EMBRYOLOGY (6). Prerequisite, Zoology 103.

Development in representative vertebrates, including man; special study of cleavage, germ-layer formation, organogenesis, and extra-embryonic membranes, using frog, chick, and pig.

*Two lecture and nine laboratory hours a week, winter and spring quarters. Laboratory fee, $10.00.* Mr. Whittinghill.

105. VERTEBRATE HISTOLOGY AND MICROTECHNIQUE (6). Prerequisites, Zoology 41 and 42.

The preparation of selected tissues and organs for microscopic examination; study of these to acquaint the student with the essentials of histology.

*One lecture and ten laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Mr. Beers.

106-107-108. MORPHOLOGY AND CLASSIFICATION OF THE INVERTEBRATES (5 each). Prerequisites, Zoology 41 and 42.

Dissection and microscopic study of selected types of the chief orders, with consideration of life histories and phylogeny. Basic course for all graduate work in zoology.

*Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $7.50 a quarter.* Mr. Beers.

109. INTRODUCTION TO HYDROBIOLOGY (5). Prerequisites, Zoology 41 and 42.

A study of animal life in water, with special reference to the relation of animals to each other and to their environments.

*Ten laboratory hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Frey.

110. GENERAL PARASITOLOGY (5). Prerequisites, Zoology 41 and 42.

A study of classification, structure, and life cycles of parasites of invertebrates and vertebrates including man; consideration of the arthropods which cause or transmit disease.

*Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $7.50.* Mr. Costello.

111. GENETICS (5). Prerequisites, Zoology 41 and 42.

The principles of Mendelian heredity, linkage, mutation, population mechanics, and the relation between genes and environment in development. Laboratory experiments with Drosophila and maize.

*Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Whittinghill.

112. VERTEBRATE FIELD ZOOLOGY (5). Prerequisites, Zoology 41 and 42.

Identification, habits, and distribution of local amphibians, reptiles, birds, mammals. Special consideration of geographic variation; speciation; ecological distribution; numbers, cycles, and populations; life histories; behavior.

*Two lecture and eight laboratory and field hours a week, spring quarter. Laboratory fee, $7.50.* Mr. Engels.

118. EXPERIMENTAL MORPHOGENESIS OF VERTEBRATES (5). Prerequisite, Zoology 104.

A study of problems in vertebrate development relating to determination, differentiation, organogenesis, and regeneration, including the concepts of dependent development, tissue affinities, gradients, and fields.

*Five lecture or discussion hours a week, spring quarter.* Mr. Lehman.

## Courses for Graduates

209-210-211. EXPERIMENTAL EMBRYOLOGY (5 each).
The study of fertilization, cell-lineage, differentiation, and regeneration of invertebrates and vertebrates from the experimental viewpoint.
*Four lecture and seminar and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $7.50 a quarter.* Mr. Costello.

212. HYDROBIOLOGY (5). Prerequisite, Zoology 109.
The study of aquatic organisms and environments, with attention restricted to a particular topic, as a small group of animals, a limited set of habitats, or special phenomena of behavior.
*Ten laboratory hours a week, winter or spring quarter. Laboratory fee, $7.50.* Mr. Frey.

213. HYDROBIOLOGY (5). Prerequisite, Zoology 109.
Advanced hydrobiology, having special reference to life in the sea and including general principles of oceanography. Reading, lectures, laboratory work, with one or more field trips to the coast.
*Ten laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, $7.50.* Mr. Coker.

214. HYDROBIOLOGY (5). Prerequisite, Zoology 109.
Methods of studying fish populations to determine their abundance, rate of growth, food habits, life histories, and general ecological relationships. Field work will include a problem relating to one of the local species.
*Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $7.50.* Mr. Frey.

215. PROTOZOOLOGY (5).
Introduction to research in protozoology. The collection, identification, and culture of selected types, chiefly free-living; microtechnical methods; survey of current literature.
*Ten laboratory and seminar hours a week, fall quarter. Laboratory fee, $7.50.* Mr. Beers.

217. CELL PHYSIOLOGY (5). Prerequisite, organic chemistry.
A consideration of the physico-chemical aspects of protoplasm, including permeability, surface tension, pH, cataphoresis, viscosity changes, and other measurable properties of living cells. Lectures; student reports.
*Five lecture or conference hours a week, spring quarter.* Mr. Costello.

222. ADVANCED GENETICS (5). Prerequisite, Zoology 111.
Studies of the effects of chemical agents in the environment upon inheritance. Reports from the literature chiefly upon the mutagenic chemicals. Laboratory experiments chiefly on the chemical induction of crossing over.
*Ten laboratory hours a week, winter quarter. Laboratory fee, $7.50.* Mr. Whittinghill.

223. RADIATION GENETICS (5). Prerequisite, Zoology 111.
Study of the action upon living cells of irradiation by X-rays, neutrons, infrared, ultra-violet, and other forms of radiation. Crossing over and mutations are emphasized.
*Five lecture or seminar hours a week, spring quarter.* Mr. Whittinghill.

330. RESEARCH IN PROTOZOOLOGY (5 or more).
Mr. Beers.

331. RESEARCH IN INVERTEBRATE ZOOLOGY (5 or more).
Mr. Beers.

332. RESEARCH IN EXPERIMENTAL CYTOLOGY (5 or more).
Mr. Costello.

333. RESEARCH IN EXPERIMENTAL EMBRYOLOGY OF INVERTEBRATES (5 or more).
Mr. Costello.

334. RESEARCH IN CELL PHYSIOLOGY (5 or more).
Mr. Costello.

335. RESEARCH IN HYDROBIOLOGY (5 or more).
Mr. Coker or Mr. Frey.

336. RESEARCH IN VERTEBRATE ZOOLOGY (5 or more).
Mr. Engels.

337. RESEARCH IN GENETICS (5 or more).
Mr. Whittinghill.

338. RESEARCH IN PHYSIOLOGY OF LOWER INVERTEBRATES (5 or more).
Mr. Jones.

339. RESEARCH IN EXPERIMENTAL EMBRYOLOGY OF VERTEBRATES (5 or more).
Mr. Lehman.

Courses 330 through 339 are designed for applicants for advanced degrees. The work of each of these courses may be continued for two or more quarters under the same course number. *Each course ten or more laboratory and conference hours a week, fall, winter, and spring quarters. Laboratory fee, $7.50 per 5 quarter hours.*

*Part Five*

# DIVISIONS, INSTITUTES, AND ORGANIZATIONS

# DIVISIONS, INSTITUTES, AND ORGANIZATIONS

William Donald Carmichael, Jr., S.B. Comm., *Controller and Acting President of the University of North Carolina*

Robert Burton House, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

The President and Chancellor head each of the divisions, institutes, and organizations listed in Part V.

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## THE UNIVERSITY EXTENSION DIVISION

Russell Marvin Grumman, B.H., *Director*

Charles Fremont Milner, A.M. in Educ., *Associate Director*

Edgar Ralph Rankin, A.M., *Head, Department of School Relations*

William John McKee, C.E., Ph.D., *Supervisor of Correspondence Instruction*

Sheldon White, B.S., *Administrative Assistant*

### *The Administrative Board

Gordon W. Blackwell, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*

Albert Coates, A.B., LL.B., *Professor of Law and Director of the Institute of Government*

George Raleigh Coffman, Ph.D., *Kenan Professor of English*

Norman Cordon, Mus.D., *Director of the North Carolina Music Program*

Oliver Kelly Cornwell, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education*

Wesley Critz George, Ph.D., *Professor of Histology and Embryology*

Samuel Huntington Hobbs, Jr., Ph.D., *Professor of Rural Sociology and Research Professor in the Institute for Research in Social Science*

Arnold Kimsey King, A.M., *Professor of Education and Associate Dean of the Graduate School*

Sturgis Elleno Leavitt, Ph.D., Litt.D., *Kenan Professor of Spanish and Director of the Institute of Latin American Studies*

Harold Diedricii Meyer, A.M., LL.D., R.S.D., *Professor of Sociology and Director of the All-University Division of Recreation*

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*The Chancellor, the Director of Admissions and the Dean of Students are ex officio members of the Administrative Board.

CHARLES FREMONT MILNER, A.M. in Educ., *Associate Director of the Extension Division*

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education*

SAMUEL SELDEN, A.B., *Professor of Dramatic Art and Director of The Carolina Playmakers*

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*

WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences*

LOUIS ROUND WILSON, Ph.D., Litt.D., LL.D., L.H.D., *Professor of Library Science and Administration*

REX SHELTON WINSLOW, Ph.D., *Professor of Economics and Director of the Bureau of Business Services and Research*

HARRY DEMERLE WOLF, Ph.D., *Professor of Economics and Director of the Institute of Industrial Relations*

EARL WYNN, M.S., *Professor of Radio and Communication and Director of the Communication Center*

## Heads of Bureaus

JOHN VOLNEY ALLCOTT, M.A., *Art Extension*

JOHN WILLIAM PARKER, A.M., *Community Drama*

GLEN HAYDON, Ph.D., *Community Music*

GORDON W. BLACKWELL, Ph.D., *Community Organization*

MARY LOUISA COBB, A.B., *Correspondence Instruction*

SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Economic and Social Surveys*

GUY BERRYMAN PHILLIPS, M.A., *Educational Information and Assistance*

EARL HORACE HARTSELL, Ph.D., *English Extension*

HARRY DEMERLE WOLF, Ph.D., *Institute of Industrial Relations*

HAROLD DIEDRICH MEYER, A.M., LL.D., R.S.D., *Recreation*

CHARLES FREMONT MILNER, A.M. in Educ., *Visual Education*

## Heads of Cooperative Services

REX SHELTON WINSLOW, Ph.D., *Director, Bureau of Business Services and Research*

EARL WYNN, M.S., *Director, The Communication Center*

NELLIE ROBERSON, A.B., *Head, Library Extension Department*

LINDSAY JACKSON PERRY, M.A., *Executive Secretary, North Carolina High School Athletic Association*

NORMAN CORDON, Mus.D., *The North Carolina Music Program*

BENJAMIN SWALIN, Ph.D., *Professor of Music in Extension*

## General Statement

By means of correspondence instruction, extension classes, public forums, lecture series, extension library service, reading courses, community dramatics, interscholastic activities, audio-visual aids, and a variety of publications, the University of North Carolina, through the Extension Division, is relating itself closely with the life of North Carolina. The University campus is now virtually conterminous with the boundaries of the commonwealth.

Starting as a Bureau of Extension in 1912 under the leadership of Dr. L. R. Wilson, former University Librarian, the idea of University extension was clarified and expanded under the administration of the late President Edward Kidder Graham. In 1921, in conformity with standards established by the National University Extension Association, the work was organized as a major division of the University by President Harry W. Chase.

In his inaugural address, November, 1931, President Frank Porter Graham defined the purposes of university extension thus: "It is the function of the state university not only to find its bits of truth and teach the truth gathered from scholars everywhere, but to carry the truth to the people that they may take it into their lives and help to make it prevail in world affairs. It is the ideal of the University Extension Division to make the resources of the universities, the discoveries of science, and the findings of the social scientists available for the people of the commonwealth."

The Extension Division is the administrative agency through which are conducted the extension activities of all the University's departments. Within recent years, moreover, the Division has developed a specialized program of adult general and professional education unrelated to the work of the resident departments. Other educational services are being offered men and women whose formal schooling has ended but who still desire to continue their education regardless of higher academic awards. In meeting the demands of this group, the future of the University Extension Division as an agency for adult education holds the greatest promise of development.

Separate catalogues and announcements of the various services are published by the University Extension Division, including Correspondence Instruction, Audio-Visual Aids, etc.

## Bureau of Art Extension

The Department of Art offers, through the cooperation of the Extension Division, extension class and correspondence courses in the history and appreciation of art. Institutes on art education are spon-

sored jointly with other state agencies and organizations. A lecture service is available. Circulating art exhibits may be secured on a loan basis. The annual North Carolina School Art Exhibition is conducted in cooperation with the Woman's College.

All of the special exhibitions in the Person Hall Art Gallery are open to the general public.

## Bureau of Class Instruction

Extension courses in regular University subjects are offered in communities throughout the state. These courses are taught by members of the University faculty and, when all requirements are met, give the same credit as courses in residence. Those not wishing degree credit are also eligible to enroll in extension classes. The classes usually meet one evening a week for sixteen weeks. An individual or group wishing to organize an extension class should make written application to the University Extension Division, giving the following information: probable number of enrollments, academic qualifications of persons who wish to join the class, course desired, when and where the class wishes to meet, and who will have charge of local arrangements.

### COURSES OFFERED

The Extension Division attempts to offer most of the courses listed in the University catalogue in any community where a sufficient number of people desire to enroll.

In order to conserve space, all other information and regulations concerning extension courses are omitted here but may be secured by sending a written request to the University Extension Division.

### IN-SERVICE TEACHER EDUCATION

Working in close cooperation with the School of Education, the Division conducts a specialized and carefully arranged program for teachers now working in the schools of the state. The aim of this program is to improve instruction in the schools and to offer opportunities for the professional growth of teachers.

## Bureau of Community Drama

The services of the Bureau of Community Drama are available to all schools, colleges, and communities throughout the state. Suggestions and advice on play production and direction may be obtained from this bureau.

Assistance is given in organizing, play selecting, the designing and making of scenery, costuming, and make-up and lighting. Arrangements may be made for assistance in the direction of a chosen play.

The bureau has at its disposal more than two thousand volumes of playbooks, books on acting, play production, little theatre organization, playwriting, stagecraft, lighting, costuming, make-up, etc. These are loaned upon payment of the postage and packing charges. By giving practical assistance to those interested in writing and producing plays, the bureau is seeking to promote and encourage dramatic art in the schools and communities of North Carolina and to stimulate interest in the writing of native drama.

### Bureau of Community Music

The Department of Music offers the following services: (1) leadership for community sings; (2) formation of community choruses; (3) lectures on public school and community music; (4) piano, violin, and organ recitals; (5) advisory service to schools; (6) concerts by the University Symphony Orchestra, the Symphonic Band, and the University Glee Clubs; (7) extension courses in music appreciation.

### Bureau of Community Organization

The services of this bureau consist of consultation and assistance to North Carolina localities in the expanding field of community organization. Cities, towns, and rural communities alike are facing serious problems of community coordination and effective citizen action for community improvement. A number of localities already have community councils or councils of social agencies to help meet these needs.

Plans of the Bureau of Community Organization include the preparation of materials for local leaders, conferences and institutes, assistance in local fact finding, demonstration projects, a state-wide advisory committee on Community Organization, and collaboration with national agencies and with community organization programs in other states.

### Bureau of Correspondence Instruction

All information and regulations concerning correspondence courses offered by the University are contained in the Catalogue of Correspondence Instruction issued separately. This contains information regarding economical plans for college and adult education.

The University offers correspondence courses to men and women in the armed forces through the U. S. Armed Forces Institute, and to veterans through contract with the Veterans Administration.

### Bureau of Economic and Social Surveys

For years the staff in Rural Social-Economics of the University has been collecting data on social and economic conditions in North Carolina. This material is available through loans from the library, articles in *The University of North Carolina News Letter,* and bulletins which record the results of a number of county surveys. The *News Letter,* which is edited by this department, appears fifteen times each year.

### Bureau of Educational Information and Assistance

The bureau is maintained through the cooperation of the School of Education. The several members of the faculty of the School offer to the state the following lines of service: educational tests and measurements; school surveys; teachers' appointments; advice and counsel with reference to school buildings, equipment, and general administrative problems.

### Bureau of English Extension

In cooperation with the Department of English, the Division conducts professional services for teachers of high school English. The North Carolina High School English Institute is held each summer. The head of the Bureau serves as executive secretary of the N. C. English Teachers Association and managing editor of the *North Carolina English Teacher.*

### Institute of Industrial Relations

Established in the spring of 1946, the Institute serves as the coordinating agency of the University and the Extension Division for the promotion and direction of educational programs in labor-management relations and programs of workers' education. Short courses, workshops, and institutes are conducted in cooperation with representatives of both management and labor organizations.

### Bureau of Lectures, Short Courses, and Institutes

The University conducts a lecture bureau for the purpose of aiding schools, civic clubs, and other organizations in obtaining speak-

ers and public forum leaders. Addresses for special occasions, such as school and college commencements, are also arranged upon application.

No fee for lecture service is charged, but the traveling and incidental expenses of the lecturer are to be defrayed by the organization for which the lecture is made. Lecture courses and public forum programs also may be arranged.

From time to time the University has held at Chapel Hill and at other places short courses or institutes for various organizations and groups. These consist of an intensive training program or course ranging in duration from one day to two weeks. The program is composed of a specialized series of lectures, discussions, and demonstrations directed by leading speakers and teachers secured from the faculty of the University and from the state and nation. Short courses have been offered to high school athletic directors, welfare workers, parents, realtors, photographers, bankers, insurance agents, members of the State Press Association, the North Carolina Medical Society, and other organizations.

In addition to those mentioned above, the Division will be glad to aid other organizations or groups in arranging for a short course, institute, special meeting, or convention.

### Bureau of Recreation

This bureau offers service in public recreation and leisure time problems through the Department of Sociology. Bibliographies and reading lists on the subjects of sociology, community organizations, etc., are provided upon request. The Bureau Head serves as Director of the North Carolina Recreation Commission.

### Bureau of School Relations

The University Extension Division, through this bureau, offers service to the high schools of the state by means of contests in debating, public speaking, and academic subjects.

The N. C. High School Debating Union is the medium through which assistance in debate is offered. This organization was established in 1912-1913. Approximately two hundred high schools discuss some important question each year. The district winners come to the University to compete during High School Week in the final contest for the Aycock Memorial Cup.

The High School World Peace Study and Speaking Program was started during the school year 1946-1947. About two hundred schools

have participated annually in the discussion of: "Is World Government the Path to Peace?"; "How Can the United Nations Be Strengthened?"; and "What is the Responsibility of the United States in World Affairs?"

The high school contests in academic subjects are conducted jointly by this bureau and by the University departments concerned. Academic contests are conducted in English, Latin, Spanish, French, physics, mathematics, and history. High school newspaper, magazine, and essay contests also are conducted.

### Bureau of Visual Education

The services of the Bureau of Visual Education are available to all schools and other educational and civic agencies on a cost basis. Primarily, the visual education services are designed to aid elementary and secondary school and college teachers to supplement classroom instruction. Consequently, material is being selected that may be integrated with the curriculum or courses of study in public schools and colleges.

The Bureau is prepared to provide a number of advisory services concerning visual aids. The educational film library loan service is described in an issue of the *University Extension Bulletin.*

## COOPERATIVE SERVICES

### Bureau of Business Services and Research

Extension of educational facilities of the University to business and industry is provided in cooperation with the Bureau of Business Services and Research of the School of Commerce. (See section of catalogue on the School of Commerce for a description of this agency.) The Bureau, through the Extension Division, services and sponsors the annual Bankers' Conference, the Southeastern Institute for Commercial Organization Executives, the Credit Bureau and Merchants Association Management Institute, the Realtors Institute, and others.

The Division, the Bureau, and the Institute of Industrial Relations cooperate in offering a summer program of short courses and workshops in industrial relations for personnel executives. Similar courses are given from time to time off the campus at various industrial centers. Similar programs are available in the fields of production management, accounting, sales management, business English, public speaking, statistics, finance, and insurance.

## The Communication Center

Through radio, motion pictures, graphic presentation, still pictures, models, film strips, recordings, illustrated publications, and eventually television, the Communication Center provides an *extension* of the University to the people of North Carolina. (See Communication Center, pp. 378-81.) By means of these communication tools much of the University's vast well of knowledge may be visualized, auralized, and distributed throughout North Carolina, providing, thus, a wider educational opportunity for those who wish to learn.

## Library Extension Department

The aim of the Library Extension Department of the University Library is to encourage discussion of current political, social, and economic problems, as well as to assist in the study of good literature. Reference material is supplied for such study.

One section renders assistance with programs and reference material, usually of a literary nature, to women's clubs and study groups, for which service a small charge is made. Another section renders assistance to schools, both students and teachers, as well as to other individuals not organized in group study. This material is usually on current problems of a political, social, or economic nature.

## North Carolina High School Athletic Association

The N. C. High School Athletic Association is the agency through which assistance in athletics is offered. This association conducts state high school contests in football, basketball, wrestling, baseball, track, swimming, soccer, six-man football, golf, and tennis. The high schools compete in districts for the honor of representing the eastern and western sections of the state, and the teams winning the sectional contests meet in the finals to determine state championships.

## North Carolina Music Program

Dr. Norman Cordon, formerly of the Metropolitan Opera Association, returned to his native state in the spring of 1948, to help in the development of good music and the general cultural life of North Carolina. He is a member of the staff of the University Extension Division and available for cooperative services with schools, churches,

colleges, and other community and state organizations. Assistance has been given to the North Carolina Symphony Society, the Carolina Folk Festival, and to the productions "The Lost Colony" and "Shout Freedom!"

## THE DIVISION OF MEDICAL AFFAIRS

The Division of Medical Affairs of the University includes the Schools of Medicine, Dentistry, Public Health, Nursing, Pharmacy, and the University Hospital and was established for the purpose of integrating and correlating the work of all the professional schools and the hospital in their teaching and research developments within the University. Equally or more important, the Division through its Administrator and Executive Board will attempt to correlate the teaching, research, and service functions of the entire State University Medical Center with the hospital and health agencies and services throughout the state.

Administratively the Division is under the direction of a full-time medical administrator, with an Executive Board on which are representatives of the various professional schools concerned and the Director of the University Hospital.

### Executive Board

HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Medical Affairs*

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Dean of the School of Dentistry*

ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

*MARION LEE JACOBS, Ph.D., *Dean of the School of Pharmacy*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

——————————, *Dean of the School of Nursing*

——————————, *Director of the University Hospital*

*Deceased, March 19, 1950.

## THE ALL-UNIVERSITY DIVISION OF RECREATION

William Donald Carmichael, Jr., S.B. Comm., *Controller and Acting President of the University of North Carolina*

Robert Burton House, A.M., LL.D., *Chancellor of the University in Chapel Hill and Vice-President of the University of North Carolina*

John William Harrelson, M.E., LL.D., *Chancellor of the North Carolina State College of Agriculture and Engineering and Vice-President of the University of North Carolina*

Walter Clinton Jackson, B.S., LL.D., *Chancellor of the Woman's College and Vice-President of the University of North Carolina*

Harold D. Meyer, M.A., LL.D., R.S.D., *Director*

### Advisory Board

C. Horace Hamilton
Oliver K. Cornwell
Thomas I. Hines
Ethel L. Martus
Harold D. Meyer
Mereb E. Mossman
Samuel Selden

The All-University Division of Recreation was established by the Board of Trustees in 1947. The growth of recreation throughout the nation, and the demand for recreation leaders, centered interest in the University on its responsibility to train leaders for this field. For some time in the University at Chapel Hill there has been opportunity to train for recreation leadership. At the State College of Agriculture and Engineering, curriculum interest is centered around the training of leaders for recreation in industry and rural life. The course interest at the Woman's College is in the training of community recreation leaders and workers in youth-serving agencies.

The All-University Division is designed to coordinate services, cooperate in the development of curricula, and integrate programs and activities.

The Division works in close cooperation with the North Carolina Recreation Commission and the North Carolina Recreation Society.

## COMMUNICATION CENTER

EARL WYNN, M.S., *Director*

CHARLES FREMONT MILNER, A.M. in Educ., *Associate Director*

RHODA M. HUNTER, M.A., *Executive and Financial Secretary*

ROBERT FREDERIC SCHENKKAN, M.A., *Assistant Director in charge of Project Coordination and Graphics Division*

ROSS SCROGGS, B.S., *Assistant Director in charge of Technical Coordination and Photographic Division*

SARAH ROSS HAMPTON, *Production Manager, Photographic Laboratory*

MACK PRESLAR, *Electronics Engineer and Technical Assistant*

EDWARD FREED, M.A., *Assistant Director in charge of Motion Picture Division*

ARTHUR V. BRISKIN, M.A., *Assistant Director in charge of Radio Division*

JOHN E. YOUNG, B.A., *Production Associate, Radio Division*

KENNETH M. MCINTYRE, B.S., *Assistant Director in charge of Utilization and Distribution Division*

LOUISE PENDERGRAFT, *Executive Secretary, Utilization and Distribution Division*

PAUL BOGER, *Field Representative, Utilization and Distribution Division*

THOMAS J. NIXON III, *In charge, Special Film Services, Utilization and Distribution Division*

ELIZABETH SHERRILL TRIPP, *Secretary, Utilization and Distribution Division*

NANCY NORTON, *Film Librarian, Utilization and Distribution Division*

### Advisory Board

WILLIAM DONALD CARMICHAEL, JR., *ex officio*

JOHN WILLIAM HARRELSON, *ex officio*

ROBERT BURTON HOUSE, *ex officio*

WALTER CLINTON JACKSON, *ex officio*

RUSSELL MARVIN GRUMMAN, *Chairman*

JOHN HAROLD LAMPE

CHARLES FREMONT MILNER

CHARLES W. PHILLIPS

BESS N. ROSA

EDWARD W. RUGGLES

I. O. SCHAUB

CLAUDE EDWARD TEAGUE

EARL WYNN

The Communication Center, approved in 1945 as a project of the consolidated University of North Carolina, operates as an educational production service for the University and the state and as a laboratory for students in radio, motion pictures, still photography, and audio-visual education. Governed by a board of advisors representing the University in Chapel Hill, State College in Raleigh, and Woman's College in Greensboro, its main purpose is to extend* the University and other significant educational projects of community and state to the people of North Carolina. The means through which this purpose is being realized can best be described under the divisions which make up the Communication Center.

## Radio Division

Radio broadcasting has been a part of the University of North Carolina's program since 1939. Since then a training program has evolved (see Department of Radio), and a well-coordinated broadcast program has been developed.

The Radio Division of the Communication Center this year is broadcasting: *The University Hour,* a thirteen-week series of dramatizations built around crucial episodes in the lives of famous University men and women—living and dead—who through their work have influenced the growth and ideals of the University of North Carolina; *Man And The Universe,* a thirteen-week series featuring Dr. Roy K. Marshall, Director of the Morehead Planetarium, in discussions of many aspects of science; a thirteen-week series of documentary dramatizations for the Resource-Use Education Commission of North Carolina depicting the conservation and wise use of all of North Carolina's natural, industrial, and human resources; and many single programs for the American Cancer Society, *The Lost Colony,* the Voice of America, Radio Diffusion Francaise, and the Hawaiian network. Except for those shipped overseas, all programs will be broadcast either through large North Carolina AM and FM networks or by transcriptions distributed to commercial stations.

Much of the responsibility for production is carried by students majoring in the Department of Radio. This responsibility provides the students with the opportunity to make practical application of the theories they have learned in the classroom.

*The Communication Center is an extension of the University to the people of North Carolina. As such, though set up as an independent organization, it will continue to work closely with the Extension Division of the consolidated University. (See Extension Division, pp. 367-76.)

### Recording

The Radio Division is equipped with professional Presto disc-recording equipment. This equipment is used not only to record all current programs for distribution to commercial stations, but also for the following purposes: (a) to record music programs for permanent record or for classroom use; (b) to record for training purposes in language, English, and speech classes; and (c) to record for film strips.

### Photographic Division

The Photographic Laboratory of the Communication Center serves all departments and agencies of the University in providing these services: (a) the photographing and processing of all types of educational photographic work; (b) the photographing and processing of film strips; and (c) the photographing and processing of slides.

### Motion Picture Division

The Motion Picture Division of the Communication Center makes available to the departments of the University, and to colleges, schools, and non-profit organizations in the state a complete service in motion picture production. This service includes: (a) planning and writing the picture; (b) shooting and directing; (c) recording of sound and music on film; and (d) titling and editing.

Last year two films were completed: *A Couple Of Guys Named Joe,* a slide film with sound depicting labor-management relationships, produced for the Wachovia Bank and Trust Company; and *My Name Is Durham,* a motion picture for the Durham Community Chest. Several films on the subjects of student government, the University of North Carolina, diamond-cutting, and dairying are now in various stages of planning and production.

Students in the motion picture classes are required to participate in the production of these films. In this way they gain practical experience in the art.

### Graphics Division

The Division of Graphic Arts, which includes the design and production of illustrated publications, posters, cartoons, diagrams, maps, models, schematics, film strips, and motion picture animation has now been set up as a part of the School of Design at N. C. State College.

During the past year, graphic displays were produced for the North Carolina Division of the American Cancer Society, for the Forestry Division of the State Department of Conservation and Development, and for the annual conference on safety sponsored by the North Carolina Industrial Commission.

### Utilization and Distribution Division

The Film Library, operated under the Utilization and Distribution Division, has been a part of the University since 1925. Since that time, the library has acquired one thousand 16mm educational film titles which are distributed by means of a trucking system and through the mails to over seven hundred public schools, adult study groups, and agencies in the state. Through this division, many audio-visual workshops for teachers are conducted each school year throughout the state. The division is well equipped with modern tools of audio-visual education which are used in the teacher-training program, as well as in the audio-visual courses taught by Mr. Milner for the School of Education.

Recordings, motion pictures, and film strips produced by the Communication Center are distributed through this division.

### Research Division

The Research Division of the Communication Center has completed its first scientific research project set up to discover the relative effectiveness of radio in teaching and communicating on a mass scale. This project was financed by the United States Navy and was conducted in cooperation with the Institute for Research in Social Science of the University of North Carolina. In connection with this project, the Communication Center is beginning its exploration of the field of television.

As a team the tools of communication generate considerably more power for education than they do separately. It is around this idea that the Communication Center of the University of North Carolina is in operation today in its attempt to extend the University and significant educational projects of community and state to the people of North Carolina.

## THE FOLKLORE COUNCIL

RUSSELL MARVIN GRUMMAN, *Chairman*
RALPH STEELE BOGGS, *Archivist*
ROBERT WHITE LINKER, *Secretary-Treasurer*

### *Executive Committee

GLEN HAYDON
ROBERT BURTON HOUSE
ARTHUR PALMER HUDSON
JOHN VOLNEY ALLCOTT

### †Advisory Board

GORDON W. BLACKWELL
GERTRUDE CARRAWAY
JOHN D. CLARK
NORMAN CORDON
NORMAN E. ELIASON
JOHN GILLIN
PAUL GREEN
ISAAC GARFIELD GREER
JOHN HARDEN
RICHARD JENTE
PHILLIPS RUSSELL
SAMUEL SELDEN
JAMES STREET
GEORGE WILSON

The Folklore Council was organized in September, 1935, to promote the cooperation and coordination of all those interested in folklore, and to encourage the collecting and preserving, the study and interpretation, the active perpetuation and dissemination of all phases of folklore. Folklore is defined by the Council as embracing all cultural aspects of folk life.

The Council represents a reorganization of The Institute of Folk Music, which was started in September, 1931, and which now becomes a division of the Council. It was found that there was need for a comprehensive organization to unify and stimulate membership of the former Institute of Folk Music.

### The Institute of Folk Music

GLEN HAYDON, *Director*
JAN PHILIP SCHINHAN, *Associate Director*

### Advisory Board

BASCOM LUNSFORD
PAUL GREEN
GEORGE HERZOG
GEORGE PULLEN JACKSON
JOHN POWELL
HELEN ROBERTS
CHARLES SEEGER
LAMAR STRINGFIELD
CHARLES G. VARDELL

*The three general officers named above are members of the Executive Committee.
† All members of the full Executive Committee are members of the Advisory Board.

FUNCTIONS OF THE INSTITUTE

As defined by the Council, folklore embraces all cultural aspects of folk life. In all lands the latter is closely allied to, and interwoven with, music in its various manifestations: as song, dance, or religious worship.

The Institute of Folk Music has varied, though related, aims:

1. The collection and preservation of indigenous material, as found in the various regions of the state.

2. The perpetuation of traditional songs, dances, and hymns through teaching traditional music in the schools and communities, as well as organizing county folk festivals and "old-time-music" conventions.

3. The scientific study, analysis, and interpretation of all the collected material.

4. The furtherance of composition based on folk music.

The Department of Music collaborates in the accomplishment of these ends, not only indirectly through its instruction in theoretical and applied music, but more particularly through courses in folk music and comparative musicology which are designed for the training of workers in this field.

## THE INSTITUTE OF GOVERNMENT

ALBERT COATES, A.B., LL.B., *Director*
WILLIAM MCWHORTER COCHRANE, A.B., LL.B., *Assistant Director*
GEORGE HYNDMAN ESSER, JR., B.S., LL.B., *Assistant Director*
PHILIP PALMER GREEN, JR., A.B., LL.B., *Assistant Director*
DONALD BALES HAYMAN, A.B., M.A., *Assistant Director*
HENRY WILKINS LEWIS, A.B., LL.B., *Assistant Director*
ERNEST WILLIAM MACHEN, A.B., J.D., *Assistant Director*
JOHN ALEXANDER MCMAHON, A.B., LL.B., *Assistant Director*
CLIFFORD PACE, A.B., LL.B., *Assistant Director*

### Board of Governors

*Chairman,* WILLIAM AUGUSTUS DEVIN, *Associate Justice, Supreme Court of North Carolina*

*Representing the State Government:*
W. KERR SCOTT, *Governor*
H. P. TAYLOR, *Lieutenant Governor*
KERR CRAIGE RAMSAY, *Speaker of the House of Representatives*

*Representing the Counties:*

CLARENCE PARKS, *Rutherford County Commissioner*
R. P. HOLDING, *Johnston County Commissioner*
F. KNOX WATSON, *Hoke County Commissioner*

*Representing Cities and Towns:*

J. RAY SHUTE, *Mayor of Monroe*
R. M. COOKSEY, *City Manager of Thomasville*
BENJAMIN CONE, *Mayor of Greensboro*

The Institute of Government grew out of the classroom of a professor in the University of North Carolina in the 1920's. It developed into a program of action supported by city, county, state, and federal officials in North Carolina during the 1930's. It became an integral part of the structure of the greater University of North Carolina in January, 1942. Its governing board consists of three mayors representing the cities and towns, three county commissioners representing the counties, and three state officials representing the state. This governing board functions under the chairmanship of Justice William Augustus Devin, of the Supreme Court of North Carolina, who has been chairman of the Institute of Government Executive Committee from the beginning.

The Institute of Government unites: public officials; private citizens; students and teachers of civics and government, in a systematic effort to meet definite and practical needs in North Carolina.

(1) It seeks to coordinate the efforts and activities of city, county, state, and federal officials who have been working for one hundred and fifty years on the same problems, for the same people, in the same territory, in overlapping governmental units, without coming together in systematic and continued cooperative effort—in the effort to eliminate needless duplication, friction, and waste.

(2) It seeks to bridge the gap between outgoing and incoming public officials at the end of their two- or four-year terms by organizing and transmitting our steadily accumulating governmental experience to successive generations of public officials—in the effort to cut down the lost time, lost motion, and lost money involved in a rotating governmental personnel.

(3) It seeks to collect and correlate for each group of public officials the laws governing their powers and duties now scattered through a multiplicity of books to the point of practical inaccessibility in constitutional provisions, legislative enactments (including public-local and

private laws), municipal ordinances, and court decisions—in the effort to make them conveniently available for practical use.

(4) It seeks to collect and compare the different methods of doing similar things arising out of the initiative and resourcefulness of officials in a hundred county courthouses, three hundred city halls, and scores of state departments and federal agencies—in the effort to raise the standards of governmental performance by lifting the poorest practices to the level of the best.

(5) It seeks to bridge the gap between government as it is taught in schools and as it is practiced in city halls, county courthouses, state departments, and federal agencies.

(6) It seeks to provide the machinery for putting the people in touch with their government and keeping them in touch with it.

(7) It seeks to build a demonstration laboratory and clearinghouse of governmental information to which successive generations of officials, citizens, and students and teachers of government may go to see demonstrated in one place the methods and practices in government they would now have to go to one hundred counties, about three hundred cities and towns, and a score or more of state departments to find—and would not find practically available for use when they have reached these sources.

The Institute of Government is working with officials and citizens and the schools to achieve the foregoing objectives through comparative studies of the structure and workings of government in the cities, counties, and state of North Carolina, by staff members going from one city hall, county courthouse, state department, and federal agency to another, collecting, comparing, and classifying the laws and practices in books and in action; it is setting forth the results of these studies in guidebooks, demonstrating them in laboratories, teaching them in training schools, keeping them up to date, and transmitting them through a clearinghouse of governmental information for officials, citizens, and teachers of civics and government in the schools.

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†Joins the faculty in September, 1950.
‡On leave, 1949-1950.

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The Institute for Research in Social Science was founded in 1924 by Howard W. Odum, who served as Director for the first twenty years. Its relation to the central administration of the University is somewhat analogous to that of the schools and major divisions of the institution. Its research professors and research associates have the rank of professors and associate professors in the University, with all their privileges and obligations. Approximately one-half to two-thirds of their time is allocated to research with the remainder devoted to teaching in one of the social science departments. A Board of Gover-

nors is composed of representatives from the University administration, the social science departments, and other agencies within the University with which the Institute cooperates. This body determines basic policies, with details of administration delegated to the Director and staff. An Executive Committee of five members, elected from the Board of Governors, acts for the Board between meetings and handles certain financial details for the Board.

Regionalism and the achieving of an understanding of the state and the South have been dominant themes in the research program.

Major functions of the Institute are: (1) to encourage and stimulate research in the social sciences at The University of North Carolina, to map out and plan for a research program through which facilities may be more abundant and coordination and integration more articulate, and to discover and develop research personnel; (2) to serve as a training center for research and planning personnel and for teachers, achieving this purpose in collaboration with the several social science departments of the Graduate School; (3) to use a regional framework for developing methods of empirical research within a theoretical context; (4) to serve as a center for cooperation with other agencies toward the development and testing of procedures for making this research of more functional value.

The research staff of the Institute is composed of research professors, research associates, and research assistants in anthropology, economics, history, political science, public administration, public health, regional planning, social psychology, sociology, and statistics. Graduate research assistants serve on annual appointment and generally carry two-thirds of a regular graduate study program. They assist in Institute research projects or serve in staff capacities under supervision, thereby securing valuable experience and training. In addition, part-time arrangements are made with other individuals, usually on the University faculty, in accordance with the research programs developed from year to year.

The Central Office, in charge of the Assistant Director, coordinates secretarial and clerical services, personnel policies, fiscal operations, purchasing, travel arrangements, and editing and preparation of research manuscripts for publication.

The studies and materials of the Institute may be grouped in the following fields: general regional culture and economy; population; local government and administration; historical backgrounds; communication media; social-industrial relations; crime and criminal jus-

tice; social anthropology; social institutions; housing; community organization; public welfare; human geography; regional, state, and local planning; research interpretation. The chronologically arranged lists of publications and studies presented in the special issue of *Social Forces* commemorating the Sesquicentennial of the University (March, 1945, pp. 309-28), together with supplementary listings, 1944-1947 and 1948, show a total of 121 books and monographs, 442 articles, chapters in symposia, proceedings, etc., 254 manuscripts, by a total of 276 authors. These authors include not only the regular Institute staff and assistants over the twenty-four-year period, 1924-1948, but also those authors with whom the Institute has undertaken cooperative research.

The Institute is housed in the third and fourth floors of Alumni Building. Facilities for staff and graduate students include, in addition to the Central Office and individual offices, a statistical laboratory, a drafting room, the departmental library of Sociology, Anthropology, Planning, and Social Work, and the large Laboratory-Workshop. This Laboratory-Workshop serves students and others as an exhibit hall, reference room, library, and general workroom in Southern regional development. Wall exhibits depict various phases of world, American, and Southern regions, and community development. Materials are available for study and research. The room is equipped for the use of and experimentation with audio-visual aids. Classes, workshops, and conference groups meet in the Laboratory-Workshop.

Additional information and application blanks for appointment to research assistantships may be obtained by writing to the Director, Institute for Research in Social Science, The University of North Carolina, Chapel Hill, North Carolina.

## THE INSTITUTE OF LATIN AMERICAN STUDIES

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The Institute of Latin American Studies, made possible through a grant from the Carnegie Corporation, brings together the courses relating to Latin America offered in various departments of the University. It offers an undergraduate major, which is in effect also a major in one of the recognized departments. The Institute also offers a program in Latin American studies for the master's degree.

The undergraduate program of courses is intended to provide a basis for graduate work in Spanish, History, or Political Science. It will be of significant value to students who wish to enter the Foreign Service of the United States or engage in Latin American trade.

In the Latin American field the University of North Carolina has a rich collection of books, many of which were secured through a grant from the Rockefeller Foundation. This collection is now being expanded through the grant from the Carnegie Corporation. With this grant a considerable amount of recording equipment has been secured for intensive language instruction in Spanish and Portuguese.

## THE INSTITUTE OF STATISTICS

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## Department of Mathematical Statistics

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## Department of Experimental Statistics

### Raleigh

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JAMES C. SENTZ, B.S. (Pennsylvania State), *Graduate Assistant*
HENRY TUCKER, M.A. (Washington State), *Graduate Assistant*

The Institute of Statistics began with the establishment in 1941 of the Department of Experimental Statistics at the North Carolina State College of Agriculture and Engineering at Raleigh. From the beginning this department has been occupied with research at least as much as with teaching. It has collaborated extensively with other departments and with Government research agencies in the design of agricultural and other experiments, as well as in calculation and interpretation of the results. This activity has continued on an enlarged scale and has been extended to a greater variety of problems and research activities involving applied statistics. In the course of this work, as in the constantly broadening applications of statistical methods elsewhere, many problems have been encountered which pertain not merely to the particular situations which gave rise to them but to a diversity of fields. For example, the combinatorial mathematics needed for the design of a field trial for efficient discrimination among the yields of several varieties of cotton may also be applied in medical research and in the sampling of human populations to obtain information needed for proper government administration more quickly and cheaply than by a complete enumeration. The same statistical formulae have been used to infer pre-history from skull measurements and to distinguish between plants of similar species.

These are problems of statistical method. They are parts of the general theory of statistics, which has in recent years taken on a co-

herent unity superseding the earlier heterogeneous ideas and formulae adapted to scattered specific needs. The theory of statistics, as now understood, includes not merely formulae and methods for combining observations and drawing inferences from them, but also the design of suitable experiments and projects for collecting data, so far as the same considerations apply to diverse fields of application. It uses a great deal of higher mathematics, and rests essentially on the theory of probability. It also has relations with philosophy through the theory of inductive inference.

The recognition that problems of general statistical theory need the attention of specialists led to the establishment of the Department of Mathematical Statistics at Chapel Hill in 1946. This is a department of the Institute of Statistics, which was at the same time established as an all-University organization, and is also a department of the University offering instruction primarily to graduate students. It supplies basic preparation for students aiming to teach statistics or to become statisticians on high levels. The training of such students includes work in both departments of the Institute of Statistics, in the Department of Mathematics, and in other University departments. Research in the theory of statistics is the leading concern of this department.

An extensive mathematical research project on Multivariate Statistical Analysis, sponsored by the Office of Naval Research, is carried on at Chapel Hill. This provides employment, training, and scope for exercising mathematical ingenuity for a number of advanced students.

The Institute of Statistics aims to advance the theory and technique of statistics, not only through the research of its members and academic courses of lectures, seminars, and laboratory work, but also in many other ways. Frequent opportunities arise for employment of advanced students in statistical work, under the supervision of members of the faculty of the Institute, on cooperative projects for agricultural and other research. Public lectures by distinguished leaders in the field are held from time to time.

Summer sessions are held in certain years, with prominent leaders of statistics in the temporary faculties. Informal conferences, collaboration, and discussion on statistical problems are encouraged by definite measures. A joint colloquium meets sometimes at Raleigh and sometimes at Chapel Hill. Members of the Institute of Statistics faculty participate extensively in the work of national and international statistical organizations and related scientific societies as presidents,

vice-presidents, council and committee members, editors of journals, and referees. At the more important statistical meetings the Institute of Statistics of the University of North Carolina is represented by members of its staff, who present original research and prepared discussion, preside over sessions, take part in deliberations, and serve as officers.

Support of the work of the Institute is provided partly by the University, partly by the sponsors of various research projects, most of which are agencies of the federal government, and partly by a grant from the General Education Board.

Courses in mathematical statistics are listed in Part IV of this catalogue. A separate and fuller announcement is published covering the work of the Institute of Statistics both at Raleigh and at Chapel Hill.

## PERSON HALL ART GALLERY

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Person Hall was built in 1795 as the University chapel, and finished in 1797 by gift of General Thomas Person. It was restored in 1937 by government agencies and through the efforts and gift of Mrs. Katharine Pendleton Arrington. It is open free daily with a program of exhibitions and gallery talks.

Exhibitions, September, 1948—September, 1949 were: Rental Collection of Facsimile Reproductions; American Landscape Painting; Claude Howell—Philip Moose, painters; Ernest Freed, etcher; Frank London, painter; Man Ray, photographs; North Carolina Architects' Exhibition; North Carolina Artists; Leo Amino, sculpture in plastics; Taliesin and Taliesin West; Frank Lloyd Wright; Arts and Crafts; Ascher Squares; Emma Lu Davis, sculpture; Mervin Jules, painter; North Carolina School Art Exhibition; Joseph Albers, painter; Flower Show, Chapel Hill Garden Club.

On permanent exhibition is the W. W. Fuller Collection of American and European Painting.

Person Hall Art Reference Library is housed in the gallery. The Library includes the Weil Collection of photographs of Italian Ren-

aissance art, the Jacocks Collection of American prints, color reproductions of old and modern masters, and the Picture Rental Collection of framed color reproductions.

The Friends of Person Hall is a public organization founded in February, 1941, to help in the development of the arts in North Carolina by working with the Department of Art. Officers 1949-1950 are:

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## ESTABLISHED LECTURES

GORDON WILLIAMS BLACKWELL, *Chairman*

### The John Calvin McNair Lectures

This lectureship was founded through a bequest, made by the Rev. John Calvin McNair of the class of 1849, which became available to the University in 1906. In the year 1908 the series of lectures was inaugurated by Francis H. Smith, Emeritus Professor of Physics in the University of Virginia. The plan and purpose of the lectures are stated in the will, which reads: "They shall employ some able Scientific Gentleman to deliver before all the students then in attendance at said University a course of Lectures the object of which Lectures shall be to show the mutual bearing of Science and Theology upon each other and to prove the existence and attributes, as far as may be, of God from Nature. The Lectures, which must be prepared by a member of some one of the Evangelic denominations of Christians, must be published within twelve months after delivery, in either pamphlet or book form."

### The Weil Lectures

During the year 1914-1915 an unendowed lectureship on American Citizenship was established by the University. The first incumbent

was former president William Howard Taft, who lectured on "The Presidency: Powers, Duties, Obligations, and Responsibilities." Since that time this foundation, named the Weil Lectures on American Citizenship, has been permanently established through the generosity of the families of Mr. Sol Weil and Mr. Henry Weil, of Goldsboro, N. C.

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The University Library contains more than 536,000 volumes. Most of its holdings are housed in the Main Library building, which should provide doubly increased facilities when the construction now underway is completed. Approximately 25,000 titles are added annually by purchase, gift, and exchange. General reference resources are strengthened by 103,006 bound periodicals, 4,676 current serials, and exceptional sets of federal and state publications.

Special collections of importance include: The Hanes Foundation for the Study of the Origin and Development of the Book; the Southern Historical Collection of more than 2,000,000 manuscripts; the North

Carolina Collection of 100,000 items relating to the state; together with unusual collections of America drama, Spanish drama, Shakespeare, Shaw, Folklore, Latin-American studies, and books by and about the Negro. The Library has extensive bibliographical facilities, including several depository catalogues of other libraries. Frequent messenger service and other cooperative relationships with the libraries of Duke University, State College, and Woman's College make the holdings of these great collections exceptionally available, and active microfilm service miraculously brings all other libraries near at hand.

Other facilities for graduate study and research include seminar rooms and individual carrels located in the bookstacks, as well as the special collections serviced in the fifteen departmental libraries assigned to art; botany; chemistry; commerce; geology; Institute of Government; law; library science; mathematics and physics; medicine and public health; music; pharmacy; psychology; sociology, anthropology, and planning; and zoology.

## THE UNIVERSITY NEWS BUREAU

Robert Wilson Madry, A.B., B.Litt., *Director*
Jake Wade, A.B., *Associate Director*
Elizabeth Dixon Napier, B.S., *Associate Director*

The University News Bureau is the official news distributing agency of the University of North Carolina at Chapel Hill. It is responsible for the gathering and dissemination of town and campus news to the several press associations, to the newspapers in North Carolina and throughout the country, and to the radio stations.

In the fall of 1918 the News Bureau was established with a full-time director for the first time in the history of the University. Prior to that, news stories from Chapel Hill were sent out by the professor of journalism and student correspondents.

Robert W. Madry was the first director of the University News Bureau which, when established, consisted of a desk and typewriter in Business Manager Charles T. Woollen's office in the Alumni Building.

Mr. Madry resigned a year later to enter the Columbia University School of Journalism. After doing newspaper work in Paris and New York, following graduation from Columbia, he returned in 1923 to become director of the News Bureau for the second time and has been in charge since then. Lenoir Chambers, now editor of the *Norfolk Ledger Dispatch,* was director of the News Bureau from 1919 to 1921,

and Louis Graves, now editor of the *Chapel Hill Weekly,* was director and professor of journalism from 1921 to 1923.

There has never been any censorship by the University Administration of news distributed by the News Bureau.

## THE UNIVERSITY OF NORTH CAROLINA PRESS

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The University of North Carolina Press was incorporated on June 12, 1922. The objects for which it was established are (1) to publish periodicals devoted to the advancement of learning and produced at the University by or under the direction of the faculty; (2) to publish catalogues, bulletins, and other documents pertaining to the University and its various schools and departments; and (3) to promote generally, by publishing deserving works, the advancement of the arts and sciences and the development of literature.

The Press was established under the authority of the Board of Trustees of the University. It is a non-stock corporation, financed in part by the University, and its policies are determined by a Board of Governors.

The Press has published twenty-five to thirty books per annum during recent years. The Press also publishes the following periodicals: *The Journal of the Elisha Mitchell Scientific Society; Studies in Philology; The James Sprunt Studies in History and Political Science; The High School Journal; Social Forces; The North Carolina Law Review; The University of North Carolina Extension Bulletin; The Library Extension Publication; The University of North Carolina News Letter; The University of North Carolina Record.*

The Press offices are located in Bynum Hall. The following agents represent the Press: W. S. Hall and Company, Continental Europe;

Oxford University Press, books in the British Isles, India and Pakistan; Cambridge University Press, periodicals in the British Isles; Henry M. Snyder and Company, world-wide representative, except in territories otherwise served; The Ryerson Press, Canada.

A complete list of publications issued by the Press will be supplied without charge to any address on request. A descriptive catalogue is also available for sale in paper and clothbound editions.

## THE INSTITUTE OF FISHERIES RESEARCH

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ALPHONSE F. CHESTNUT, M.S., *Specialist in Oyster Culture and Associate Professor*

ALFRED CARTER BROAD, A.B., *Scientific Assistant and Instructor*
EDWARD LEIGH WINSLOW, JR., B.Sc., *Assistant in Oyster Investigations*
WILLIAM H. SUTCLIFFE, M.S., *Temporary Assistant, 1949*
HORACE G. LOFTIN, JR., *Temporary Assistant, 1949*

The Institute of Fisheries Research was established by action of the Board of Trustees September 29, 1947. It is operated by the University with the collaboration of the Department of Conservation and Development. The function of the Institute is to make practical application of biology and other sciences, including economics and marketing, to the problems of the fisheries of North Carolina. It endeavors through scientific research to arrive at a better practical understanding of the conditions that impede development of the state's marine fisheries and of the principles that should govern the application of measures of conservation. The establishment of the Institute rests, then, on the belief that not only those engaged in fisheries and related industries but also the state as a whole could profit more from our marine resources.

It is believed that proper rules of conservation of fisheries resources are not best arrived at by mere hit-or-miss methods or by the sincerest effort to satisfy now one and now another group having special interests and necessarily limited knowledge. There is needed, as seems generally recognized, more basic knowledge concerning our resources. Facts are wanted, rather than casual theories, as to what actually governs the abundance of fishes and shellfishes, which show continual changes with decrease and increase of numbers. Understanding is wanted concerning what directs the movements of particular groups of fishes, so that desirable or undesirable kinds are here or there, from season to season and from year to year, in unpredictable fashions. This, in turn, means that more should be known about the underlying physical, chemical, and biological conditions and their changes, reflected in fluctuations of basic food supplies, salinities, temperatures, currents, stream discharge, and oceanic circulation. It is assumed also that properly conducted scientific and economic studies may be helpful in promoting efficient and more profitable practices in exploitation, processing, and marketing of fishery products.

The interest of the University and the state in applications of marine biology and in fisheries began more than half a century ago with the establishment of a summer laboratory at Beaufort through the Department of Biology and active cooperation from the State Geological and Economic Survey, partial predecessor of the present

Department of Conservation and Development. This laboratory developed into the Fisheries Biological Laboratory operated by the federal government. Despite its services and potential usefulness, experience has proven that this laboratory cannot meet the full practical needs of the state.

More recently, the University has again interested itself in the problems of fisheries and, with the effective cooperation of the Department of Conservation and Development and its Division of Commercial Fisheries, there has been established at a favorable location near Morehead City a laboratory for fisheries research. Its inauguration was made possible by a four-year grant from the Knapp Foundation, Inc., of New York, conditioned on matching contributions from the state. The grant from the Knapp Foundation is "A tribute to Joseph P. Knapp's lifelong interest in the betterment of mankind." The matching on the part of the state for the first biennium was accomplished by giving the Institute direction of an appropriation made by the legislature of 1947 for a survey of off-shore shrimping grounds and a part of the appropriation from the same legislature for the rehabilitation of the oyster and other shellfish. The cooperation of the Commission for the Survey of Shrimping Grounds and of those concerned with the oyster industry has made this possible. The last legislature made an appropriation through the Department of Conservation and Development, to match the grant to the University from the Knapp Foundation for the biennium 1949-51.

Meantime, with financial aid from an alumnus, Mr. George Lurcy of New York, matched by a grant from the General Education Board, there had been undertaken a Survey of Marine Fisheries of North Carolina. The report of the Survey is now ready for publication.

The Institute will contribute to the educational program of the University by offering practical training and guidance for graduate students.

Courses in hydrobiology and fishery science are described in Part IV of this catalogue under Department of Zoology (page 360).

## THE MOREHEAD BUILDING AND PLANETARIUM

Gift of John Motley Morehead (Class of 1891), the Morehead Building contains the Memorial Rotunda, Faculty Lounge, University Room, and a dining room and kitchen for official functions of the University. Among the paintings from the Genevieve B. Morehead collection permanently hung in the Rotunda are Rembrandt's por-

trait of his sister and many other valuable works of famous artists. Two large galleries flanking the Rotunda provide space for temporary exhibitions.

The scientific portion of the building contains one of only two large orreries in the world, as well as the sixth Zeiss Planetarium installation in the Western Hemisphere, and the only one on a university campus. A realistic appearance of the sky as seen by the unaided eye is projected by the great instrument onto the sixty-eight-foot stainless steel dome of the chamber, in which are located in circular rows 490 seats for visitors. Spectacular demonstrations presented since the Morehead Planetarium opened on May 10, 1949, have included "Star of Bethlehem," "Trip to the Moon," "Easter, the Awakening," and many others. Public demonstrations are given every evening and at Saturday and Sunday matinees, and the program is changed every three or four weeks. In the first year of operation, more than 175,000 visitors saw showings of the Morehead Planetarium.

The equipment is also used for University classes in astronomy and navigation, and special week-day showings are arranged for public school children of North Carolina.

*Part Six*

# DEGREES CONFERRED

## DEGREES CONFERRED AUGUST 30, 1948

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Martha Jane Myers
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Nelson Page
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Mary Edna Knight
Martha Kochenderfer
Jessie McKee
Jessie Florine Pearson
Martha Lorena Wagoner
Catherine Virginia Weir

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Elizabeth Butterworth Curry
Fred Benedict Emmerson
Arthur Lee Fickling
Elizabeth Brooks Fickling
Croatan Lofton Fouts
Julia Evelyn Fuller
James William Hagy
Laxton Hamrick
John Marshall Hartley
Junior LaFayette Hiatt
Francis Lentz Hoover
Dorothy Eugenia Knott
Permillas Arten Lee, Jr.
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Eunice Idell Lowder
Ross McCain Lynn
Frank Daniel McLeod
Lillian Dyer Meredith
James Otis Miller, Jr.
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Ivan C. Pearson
Hobert Lee Perdue
Selma O'dell Pritchard
Margaret Jean Scott
William Columbus Self
Nathaniel Hawthorne Shope
Gay Coyle Stewart
Walter Benjamin Thomas
Charles Henry Tietjen

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Mary Margaret Carroll
Robert Charles Stuart, Jr.

MASTER OF SCIENCE IN SOCIAL WORK

Linda Miller Summer

MASTER OF PUBLIC HEALTH

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Genevieve Burton
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Virginia Poindexter Crenshaw
Ruth Elise Dart
Nettie Lee Day
Virginia Earle
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Betty Ficquett
Norman Elmo Gaskill
Eva Viola Higdon
Elsie Virginia Hough

Elizabeth Hyde Kasey
William Ririe Manning
Lura Rhodes Martin
Evalyn Claire Melton
Elizabeth Elphabelle Mumm
Dorothy Mae Nelson
Joseph Anthony Rinaldi
Natalie Claudia Sheller
Daniel Arthur Sullivan
Maryrose Johnston Tomassi
Victor Maria Velasco
Philip Louis Weinstein
Carl Buchanan Young, Jr.

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### MASTER OF SCIENCE IN PERSONNEL ADMINISTRATION

Doris Inez Johnson

### MASTER OF SCIENCE

John Sutton Barlow
Samuel Owen Cornwell
Janis Marie Viser

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Thomas Jacks Blalock
Dorothy Rhyne Blyth
James Vernon Camp
Ruth Maidee Cochran
George Harvey Deming
Hubert Conrad Dixon
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Arthur David Golby
Walter Thomas Graybeal
John Miller Grier
Donald Graham Henderson
Ralph Thomas Parkinson
Emily Geraldine Porter
Eleanor Lambeth Rankin
Henry Blount Rollins
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Benjamin Granade Koonce, Jr.
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Charles Alexander McMurray, Jr.
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Marvin George Morillo
Louis VanLoan Naisawald
Lillian Mary Negueloua
Elsie Nunn
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Floyd Vance Spence
Walter Sheldon Spike
Paul Kiser Starnes
James Aubrey Tinsley
Walter Blake Rutland
Imam M. Selim
Robert Newton Shervill
Thomas Raikes Slinkard
Elizabeth May Snow
Daniel Creighton Sossomon
Paul Wilson Titman
Marilyn Ford Vincent
Dan Sims Wages
Ella Gray Wilson
Fred Boyer Wright

### DOCTOR OF PHILOSOPHY

Madie Belle Ward Barrett, *Comparative Linguistics*
Thesis: A Phonology of Southeast Alabama Speech.

Julian H. Blau, *Mathematics*
Thesis: Convergence of Measures.

Charles Morgan Clarke, *Education*
Thesis: Philanthropic Foundations and Teacher Education in the South, 1867-1948.

Eugene Wood Davis, *History*
Thesis: Severus Alexander.

Thomas Parry Field, *Geography*
Thesis: A Geographic Traverse of Southern North Carolina.

Timothy Paul Fry, *English*
Thesis: A Study of the *Ludus Coventriae* with Special Reference to the Doctrine of the Redemption.

Alan Pendleton Grimes, *Political Science*
Thesis: The New York *Nation*, 1865-1932: A Study in Political Liberalism.

Monroe Johnson Hagood, *English*
Thesis: The Beginnings of Literary Nationalism in American Magazines.

Robert Charles Harrington, Jr., *Chemistry*
Thesis: The Effect of Position Isomerism on the Surface Activity of Certain Sodium Alkoxybenzoates and Sodium Phenoxylalkanoates.

Robert Moore Hughes, *Psychology*
Thesis: A Factor Analysis of Rorschach Diagnostic Signs.

Margaret Evans Lerche, *History*
Thesis: The Life and Public Career of Archibald D. Murphey.

David Henry Malone, *Comparative Literature*
Thesis: The Influence of Rimbaud and Laforgue on American Poetry.

Robert Witherspoon Miller, *Chemistry*
Thesis: Synthesis of Certain Substituted Biurets.

Will Chapel Rogers, *Psychology*
Thesis: Comparison of the Anti-Social Psychopathic Prisoner with the Non-Psychopathic Prisoner.

George Parker Winship, *English*
Thesis: A Study of the Essay Journal *The World* (1753-1757).

Sam Clement Webb, *Psychology*
Thesis: The Measurement and Prediction of College Students' Interest in Natural Science Subjects.

## DEGREES CONFERRED JUNE 6, 1949

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Faith Dorsey Adams
Grey Littleton Adams
Henry Bethune Adams
Simeon Huey Adams
Joseph Kermit Albertson
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Robert Mouzon Allen
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James William Anderson
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Leland Stanley Averett, Jr.
George Stewart Aycock
Edward Owen Baicy
Calvin Benham Baldwin, Jr.
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Norman Cowell Barnes
Charles Mason Barnett
Robert Marshall Barr
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Ronald Denny Berry
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Betty Jane Blalock
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Iris Lee Bost
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Richard Lee Bowen
Bowman Duncan Brackin
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John Steger Meade, Jr.
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Boyce Miller Olive
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Elizabeth Varnado Harrer

Ernest Eugene Harrill
Max Frank Harris
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Samuel Hirsch
Ann Clark Howe
Charles Alfred Howe
Morgan Hughes
Maeburn Bruce Huneycutt
Kermit Houston Hunter
Rhoda Mabel Hunter
James Edward Jackson
James Frederick Jeffries, Jr.
James David Johnston III
Edith Semat Kemp
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Anne Henderson Lindsey
Albert Edwin Lovejoy
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Lillian Sloan Norwood
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William Roper Pendergrass
Paul Ramsey, Jr.
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Robert Grissom Schultz
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James Wilson Walker
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William Swoll Winn
Meldrum Barnett Winstead, Jr.
Walter Lucius Withers
Edwin Lee Wood
Mildred Fite Woodward

## DOCTOR OF PHILOSOPHY

Emmett George Asseff, *Political Science*
Thesis: Case Studies in County Government.

Leonard Lee Bennett, Jr., *Chemistry*
Thesis: The Condensation of Acetylglycine with Ethyl Orthoformate in Acetic Anhydride.

Francis Wesley Bonner, *English*
Thesis: A History of the Chaucer Aprocrypha.

Olin Henry Borum, *Chemistry*
Thesis: A Study of Some Reactions of Alpha Amino Acids.

William Bracy, *English*
Thesis: *The Merry Wives of Windsor*: A Critical Study of Textual Transmission and Related Problems.

Ralph Allan Bradley, *Mathematical Statistics*
Thesis: Sampling Distributions for Non-Normal Universes.

Uttam Chand, *Mathematical Statistics*
Thesis: On Certain Composite Hypotheses Concerning Regression Coefficients and Means.

Wilfred Sellers Dowden, *English*
Thesis: Metempsychosis and Closely Related Beliefs in English Romantic Poetry.

Porter Lee Fortune, Jr., *History*
Thesis: George M. Troup: Leading State Rights Advocate.

Rosalyn Howard Gardner, *Romance Languages*
Thesis: Studies in Fourteenth Century French Syntax.

Edgar Hunt Goold, Jr., *English*
Thesis: Mark Twain's Literary Theories and Opinions.

Marion Austin Greene, *Romance Languages*
Thesis: Studies in Fifteenth Century French Syntax.

Thomas Hyman Guion, *Chemistry*
Thesis: Part I: A Study of Methods of Preparing Some Derivatives of 1, 4, 2-Benzoxazine; Part II: A Study of Some Factors Affecting the Formation of Reissert Compounds.

Clifton Landon Hall, *Education*
Thesis: Some Historical Considerations of the Status of the Teacher.

Gary Fred Hawkins, *Chemistry*
Thesis: The Preparation of Heterocyclic Fluorine Compounds by the Schiemann Reaction.

Regina Catherine Henley, *Zoology*
Thesis: Chromosomal Mosaicism and Abnormalities of Mitosis Produced by Experimental Temperature Shock on the Developing Embryos of *Triturus Torosus.*

Patrick Henry Hobson, Jr., *Chemistry*
Thesis: Preparation and Polymerization of Some Substituted Styrenes.

Alpheus Sheffield Hodge, *Romance Languages*
Thesis: A Critical Edition of *Hue Capet,* with Introduction, Notes, and Glossary.

C. Hugh Holman, *English*
Thesis: William Gilmore Simms's Theory and Practice of Historical Fiction.

Herman Arnold Jarrell, *Physics*
Thesis: The Infrared Absorption of Hydrogen Telluride Vapor.

Joseph Herman Johnson, *Sociology*
Thesis: Social Control of Syphilis: A Study of the Alabama Program.

Peter Dexter Johnson, *Chemistry*
Thesis: Magnetic and Related Properties of Manganese Activated Phosphors.

Rigdon Wayne Kernodle, *Sociology*
Thesis: The Effect of World War II on the Incidence of Marriage in the Hampton Roads-Peninsula Area.

Robert Guilford Lewis, *Romance Languages*
Thesis: Preliminary Studies in the Perceforest.

Lollie Roberta Lovelace, *Zoology*
Thesis: The Effects of Precocious Sperm Entry on the Egg of *Nereis limbata* Ehlers.

Malcolm Cook McMillan, *History*
Thesis: Constitutional Development in Alabama, 1819-1901.

Leland Weber Miles, *English*
Thesis: Plato and the Early Reformation.

Caroline Jennings Pace, *English*
Thesis: The Anatomy of Justice in Shakespeare's Plays.

James Edward Poindexter, *English*
Thesis: Criticism of Falstaff to 1860.

William Thomas Rainey, Jr., *Chemistry*
Thesis: Surface Activity Studies. The Introduction of Certain Hydrophilic Groups in the Benzene and Biphenyl Series.

Irving Ribner, *English*
Thesis: Machiavelli and Sir Philip Sidney.

Philip Morrison Rice, *History*
Thesis: Internal Improvements in Virginia, 1775-1860.

Stanley Linn Robe, *Romance Languages*
Thesis: A Dialect and Folkloristic Study of Texts Recorded in Los Altos of Jalisco, Mexico.

Rinaldo Charles Simonini, Jr., *English*
Thesis: Florio's *Second Fruites*: A Critical Edition.

Anna Greene Smith, *Sociology*
Thesis: Fifty Years of Southern Writing.

Sanford Lewis Steelman, *Biological Chemistry*
Thesis: The Effort of Certain Organic Anions on Amide and Peptide Linkages.

Elbert Daymond Turner, Jr., *Romance Languages*
Thesis: The Vocabulary of Bernal Diaz del Castillo's *Historia Verdadera de La Nueva Espana.*

Arthur W. Waltner, *Physics*
Thesis: Cloud-Chamber Investigations of the Low-Energy Portion of the Beta-Particle Spectrum of Radium E.

Lillian Estelle Worley, *Geography*
Thesis: The Urban Geography of Birmingham, Alabama.

Wilfred Buck Yearns, Jr., *History*
Thesis: The Confederate Congress.

Julian Clifton Yoder, *Geography*
Thesis: North Carolina: A Geographic Study.

## HONORARY DEGREES

### DOCTOR OF LETTERS

Norman Foerster

### DOCTOR OF LAWS

Beatrice Cobb
Harry Fulcher Comer
John Rood Cunningham
Robert Bingham Downs
Gordon Gray
Carl Vernon Reynolds
James Edwin Webb

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